Kodak

PIXPRO S-1

Compact System Camera

User Manual

BC

1 Before You Start

Declaration of Conformity

Responsible Party: JK Imaging Ltd.
Address: JK Imaging Ltd., 17239 So. Main Street, Gardena, CA 90248 USA
JK Imaging Europe, 71 Clarendon Road, Watford, WD17 1DS, UK
Company Website: http://kodakpixpro.com

INDUSTRY CANADA

This device complies with Canadian RSS-210.

This device complies with Industry Canada license-exempt RSS standard (s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radiation Exposure Statement:

The product comply with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

For Customers in Europe

This symbol [crossed-out wheel bin WEEE Annex IV] indicates separate collection of electrical waste and electronic equipment in the European countries. Please do not throw the equipment into domestic refuse. Please use the return and collection systems available in your country for proper, safe disposal of this product.

CE "CE" mark indicates that this product complies with the European requirements for safety, health, environment and customer protection. "CE" marked cameras are intended for sales in Europe.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN 60950-1: 2006+A11:2009 +A1:2010 +A12:2011

Safety of Information Technology Equipment

- EN 62311: 2008/ Article 3(1) (a) and Article 2 2006/95/EC

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz-300 GHz) (IEC 62311:2007 (Modified))

- EN 300 328 V1.7.1: 2006

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

- EN 301 489-1 V1.9.2: 2011

Electromagnetic compatibility and Radio Spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

- EN 301 489-17 V2.2.1: 2012

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2.4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment.

For Customers in the U.S.A.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

About this Manual

Thank you for purchasing the KODAK PIXPRO Compact System Camera. Please carefully read this manual and keep it well for future reference.

- JK Imaging Ltd. reserves all rights of this document. No part of this published manual may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language or computer language, in any form, by any means, without the prior written permission of JK Imaging Ltd..
- All trademarks mentioned in this manual are used for identification purposes only and are properties of their respective owners.
- This manual is to introduce you how to operate this KODAK PIXPRO Compact System Camera. JK Imaging Ltd. has tried its utmost to ensure the correctness of all contents here, but reserves the right to modify. All of these contents are subject to change without prior notice.
- Throughout this manual, the following symbols are used to help you locate information quickly and easily:

  Indicates useful information.

  Indicates precautions are to be taken while operating the camera.

- In introducing you how to operate this camera, the following symbols may appear to facilitate your understanding:

  「Item properties」: The optional properties in the camera interface are indicated by the symbol「」.

2 Safety Notes

Safety notes for this camera

- Do not drop the camera or allow it to hit solid objects.
- Do not disassemble or repair this camera by yourself.
- To prevent the camera from being damaged by moisture, do not use or store the camera in very humid environments, such as in rain or near bodies of water.
- Do not use or store the camera in dusty places or on a beach to prevent dust or sand from entering the camera, causing possible damage to it.
- Do not use or store the camera in a hot environment or under direct sunlight.
- Do not use or store the camera near a powerful magnetic field, for example near a magnet or transformer.
- Turn the camera off, remove the battery and the memory card, and dry it within 24 hours if water accidentally comes in contact with the camera.
- When you take the camera from a cold place to a warmer environment, condensation may occur. Please wait for a reasonable period of time before you turn it on.
- Before you remove the battery and memory card, the camera should be turned off.
- In demounting the lens, the image sensor will be exposed. To avoid scuffing, please don't touch the image sensor.
- Do not place fingers in the bayonet of camera. As the components of image sensor are precise, failures or damages may be caused.
- In cleaning the camera body, please don't use corrosive cleaning agents or those with alcohol or organic solvent.
- Advise to use soft lens cloth to regularly clean the camera's body and lens mount.
- If this camera is not in use for a long time, please keep it in a dry and clean condition.
- Our company will not pay compensation for any failure of playback of pictures or videos caused by improper operation.

Safety notes for battery

- Please use the battery with the same type as the attached.
- Please use the attached charger to charge the battery.
- If the liquid leaking from the battery contacts with your skin, please immediately flush with water and seek medical treatment. If the liquid leaks into the camera, please contact the retailer.
- Please dispose the wasted battery in accordance with local (national or regional) regulations.
- To prevent the battery from being damaged, do not drop the battery or allow it to hit solid objects or to be scratched by the objects.
- Do not let the battery come in contact with metal objects (including coins) to avoid short circuiting, discharging, excessive heat, or possible leakage.
- Do not attempt to disassemble the battery.
- Do not expose the battery to water. Always keep the battery contacts dry.
- Do not heat the battery or throw it into a fire to avoid a possible explosion.
- Do not store the battery in a hot environment or in direct sunlight.
- If an overheating happens during charging or use, please immediately stop charging or using and then take out the battery with care in shutdown mode to wait it for cooling.
- If it is not used for a long time, please remove the battery for proper keeping.
- In a colder environment, the performance of the battery could be noticeably reduced.
- When you install the battery, install it according to the positive and negative markings on the battery compartment. Never force it into the battery compartment.

Safety notes for memory card

- We suggest buying only well-known, name brand memory cards to ensure peak performance.
- Format the memory card using the camera before you use it or insert a new one.
- Do not make the memory card fall off from high places or hit by heavy objects to prevent damaging it.
- Do not attempt to disassemble or repair the memory card.
- Do not expose the memory card to water. Always keep it dry.
- Do not remove the memory card when the camera is turned on. Otherwise, the memory card could be damaged.
- Do not directly edit the data on the memory card. Copy the data to your PC before you edit them.
- When the camera is stored for a long period of time, be sure to download your photos and remove the memory card. Store it in a dry environment.
- Do not modify the name of the files or folders of the memory card using your PC. Modifying the file names may cause the files to not be recognized on the camera or a possible error may occur.
- A photo taken with the camera will be stored in the folder that is automatically generated on the memory card. Do not store photos that are not taken using this camera in these folders as the pictures cannot be recognized during the playback.
- When you insert a memory card, make sure the notch of the card matches the markings on the top of the card slot.

Attentions for Use of Lens

- Remove dirt and dust on the front and rear lens caps before and after use.
- Wipe the lens using professional lens cleaning paper.
- To avoid scratching the mount, do not mount the lens at an angle to the camera.
- To protect the lens surface, use the lens cap when you are not using the lens.
- Mount or remove the lens in a place with little dust.
- After the lens is removed from the camera, install the front and rear lens caps and place it with the bottom facing upwards to avoid scratches to the surface and contacts.
- Be careful not to stain or damage the contacts.
- Do not expose the camera lens to direct sunlight for long periods of time.
- Do not place the product where it can be reached by infants and children.
- When you do not use the lens for a long period of time, store it in a dry and clean place.

Other Safety Notes

- Do not disconnect the power or turn the camera off during the update process. Doing so may cause incorrect data to be written and the camera may not power on later.
- Do not hang the neck strap of the camera around the neck of a child.
- When using your camera on an airplane, observe the relevant rules specified by the airline.
- Due to the limitations of manufacturing technology, the LCD screen may have a few dead or bright pixels. These pixels do no effect the quality or performance of the camera, photos or video.
- Do not expose the LCD screen to water. In a humid environment, only wipe it with a soft and dry cleaning cloth.
- If the LCD screen is damaged and the liquid crystal comes into contact with your skin, wipe your skin with a dry cloth immediately and rinse it with clean water. If liquid crystal comes into contact with your eyes, wash them with clean water at least for 15 minutes and seek immediate medical attention. If you accidentally swallow liquid crystal, rinse your mouth immediately and seek medical attention.

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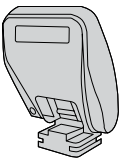
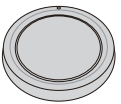
4 Getting Ready

Accessories Included

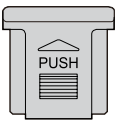
Your camera box should contain the camera model you purchased along with the following accessories. If anything is missing or appears to be damaged, please contact your retailer. (The battery chargers may be a little different in shape due to the difference of countries or regions this type of cameras are sold to, so please subject to the physical product.)



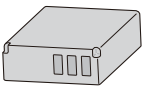
Flash



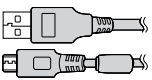
Camera cover (installed on the camera at the factory)



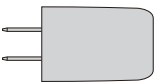
Protective cover of hot shoe (installed on the camera at the factory)



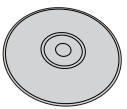
Rechargeable Li-ion battery



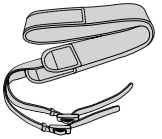
USB cable



AC adapter



CD-ROM



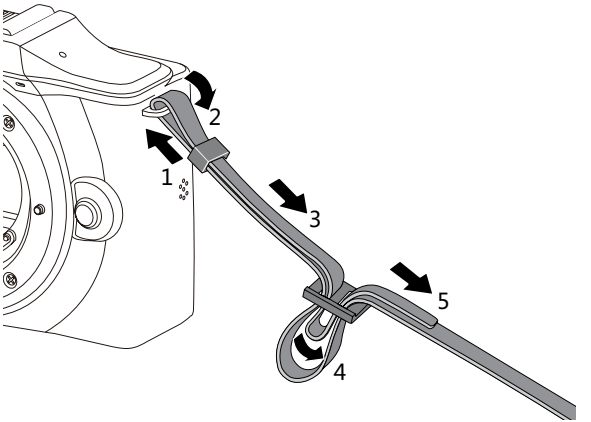
Neck strap

User manual

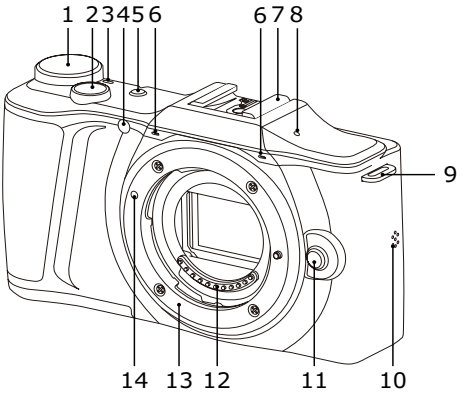
Warranty card

Service card

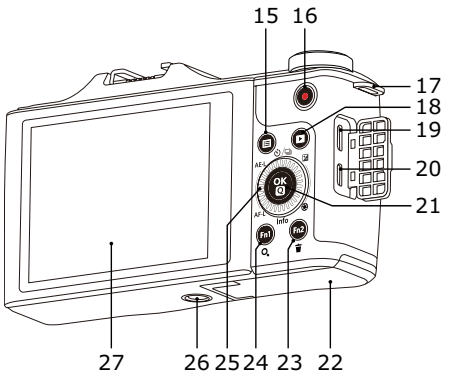
Mounting Neck Strap



Part Names



1. Mode Dial
2. Shutter Button
3. LED Indicator
4. AF Assist Beam / Self-timer Indicator Light
5. Power Button
6. Microphone
7. Hot Shoe
8. [ ] Wi-Fi Signal Indicator
9. Strap Eyelet
10. Speaker
11. Lens Release Button
12. Lens Electrical Contacts
13. Lens Mount
14. Camera Mounting Mark



Rolling the jog dial can be for fast selection instead of pressing the direction button.

15.[☰] Menu Button

16.[●] Fast Video Recording

17.Strap Eyelet

18.[▶] Playback Button

19.Micro USB Port

20.Micro HDMI Port

21.[OK/Q] OK Button

22.Battery Cover

23.[**Fn2**] Custom Button 2

24.[**Fn1**] Custom Button 1

25. Jog Dial

[▲⏲/🖳] Timer / Self-timer Button (up)

[▼**Info**] Info Button (down)

[◀**AE-L/AF-L**] Lock Button (left)

[▶🖼/☯] Exposure Button (right)

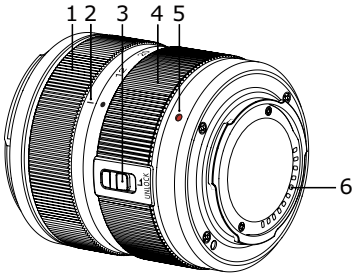
26.Tripod Socket

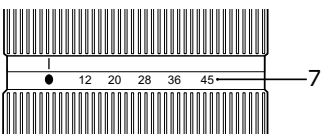
27.Pivoting LCD Screen

Description of Lens

Micro 4/3™-mount Lens
This cameras is suitable for lens with a Micro 4/3-mount.

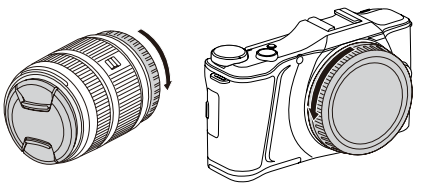
A diagram of the KODAK PIXPRO SZ ED 12-45mm F3.5-6.3 AF Lens will be used as an example to introduce the use of the lens.





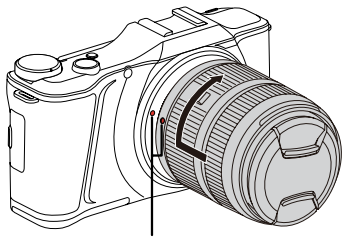
1	Focus ring
2	Zoom location mark
3	Lens back switch
4	Zoom ring
5	Lens mounting mark
6	Lens electrical contacts
7	Focus scales

Install / Remove Lens



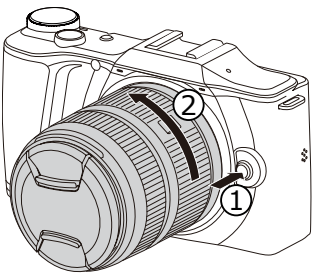
Install Lens

1. Remove the rear lens cap and body cap.



2. Align the camera mounting mark with the lens mounting mark and rotate in the direction indicated by the arrow until the lens clicks into place.
3. Remove the front lens cap.

4. To use the lens, slide the lens back switch and rotate the zoom ring until the lens zoom location mark is aligned with the "12".

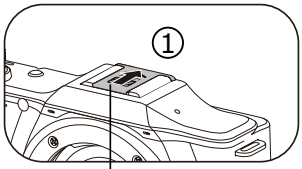


Remove Lens

1. Rotate the lens as per the direction of arrow ② while pressing the Lens Release Button as per the direction of arrow ① , and remove the lens.
2. When the lens is removed, the protective covers should be installed on both sides of the lens and on the camera body.

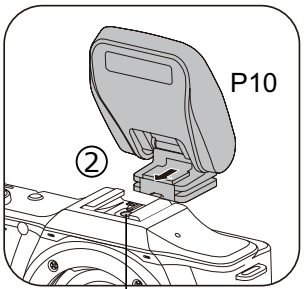
Install the Flash

Take the P10 type flash as an example to introduce how to use the flash.



Protective Cover of Hot Shoe

1. Follow the direction ① shown by the arrow to remove the protective cover of hot shoe.



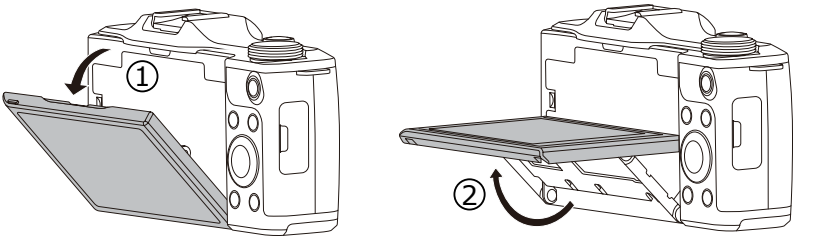
Flash-sync Contacts

2. Follow the direction ② shown by the arrow to install the flash.

If the flash options cannot be set after the flash is installed and enabled, please reinstall the flash or wipe the flash-sync contacts with a dry cloth.

Pivoting LCD Screen

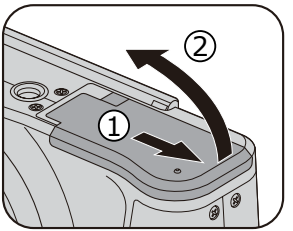
The LCD screen is housed in the camera's body. You may follow the directions shown below to move it as needed:



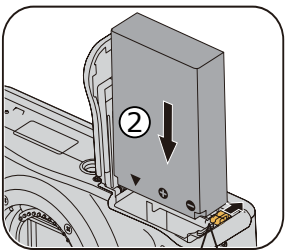
1. Turn over the LCD screen by following the direction ① shown by the arrow.
2. Move it by following the direction ② shown by the arrow.

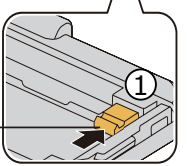
The LCD screen moves in the vertical direction only. Please don't force it to rotate in any other direction.

Installing Battery and Memory Card



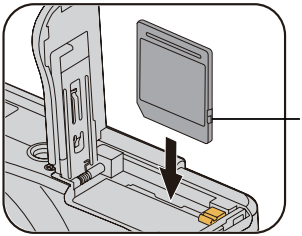
1. Open the battery cover according to the direction of arrow.



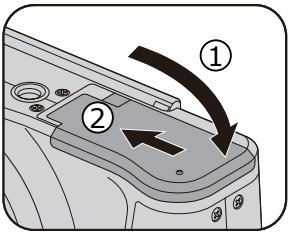


Battery lock knob

2. Insert the battery into the battery compartment according to the negative and positive directions as illustrated in the picture, till the battery lock locks it in place.



3. Insert the memory card into the memory card slot as shown in the diagram.

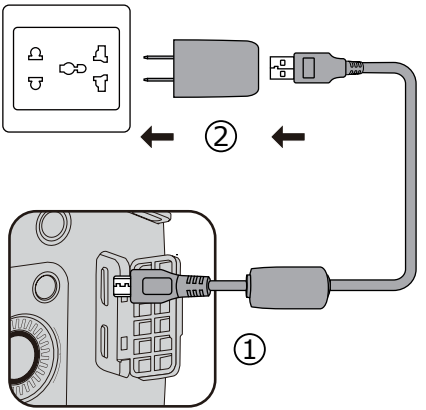


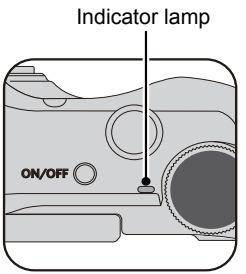
4. Close the battery cover.

The memory card (SD/SDHC) is optional and not included in all camera packaging. If you have to purchase a memory card, select one with storage capacity between 4GB and 32GB to ensure correct data storage. Cards above 32GB will not work.

To remove your memory card, open the battery cover, gently press the memory card to eject it and remove it carefully.

Charging Battery





Please insert the battery and charge it under shutdown mode.

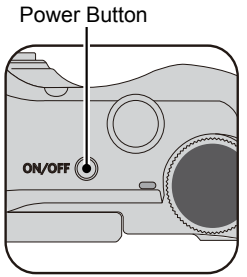
1. Connect the camera to the AC Adapter with a USB cable.
2. Insert the plug of the AC Adapter into the wall outlet to charge the battery.

After the battery is stored for a long period of time, use the supplied power charger to charge the battery prior to use.

Please charge the battery indoors between 0°C and 40°C.

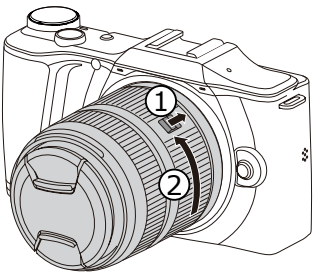
Charging indicator:
Steady orange: Charging
Steady green: Charging complete
To have maximum battery life, charge the battery for at least 4 hours the first time.

Turning Camera On and Off



On

1. Please remove the front lens cap before turning the camera on.
2. Press the Power button to turn the camera on for taking pictures.
3. If you would like to enter directly into Playback mode, the camera can be turned on by pressing and holding the ▶ button.



Off

1. Press the Power button to turn the camera off.
2. Pull the lens back switch as per the direction of arrow ① and then rotate the lens clockwise as per the direction of arrow ② , and release the switch till the lens retracts completely.
3. Install the front lens cap.

Set your Language, Date/Time

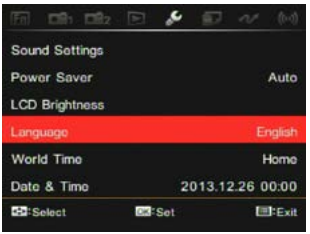
Set your Language, Date/Time after the first power-on

1. When you turn the camera on for the first time, the language selection screen appears.
2. Press the arrow buttons to select your desired language.
3. After you press the (OK) button to confirm the selection, the Date/Time settings screen appears.

4. Press the [◀AE-L/AF-L] / [▶/] button to select the Date/Time to be adjusted: Time is displayed in YYYY: MM: DD HH:MM.
5. Press the [▲/] / [▼Info] button to adjust the value for the selected Date/ Time.
6. Press the (OK) button to confirm the time settings and the snapshot screen appears.

Resetting your Language

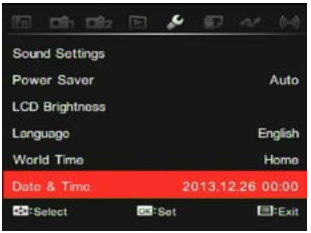
After you set your language for the first time, follow the instructions below to reset your language.



1. Press the (MENU) button.
2. Press the [◀AE-L/AF-L] / [▶/] button to select .
3. Press the [▲/] / [▼Info] button to select 「Language」 and then Press the (OK) button to enter a menu.

4. Press the [▲/] / [▼Info] button to select a language and then press the (OK) button to confirm.
5. Press the (MENU) button to return the camera to photo mode.

Resetting Date & Time



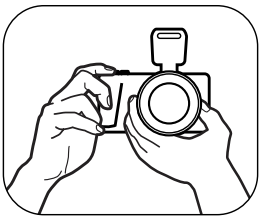
After you set your Date/Time for the first time, follow the instructions below to reset date and time.

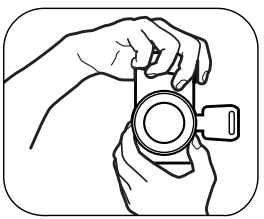
1. Press the (MENU) button.
2. Press the [◀AE-L/AF-L] / [▶/] button to select .
3. Press the [▲/] / [▼Info] button to select the 「Date & Time」 and then press the (OK) button to enter a menu.

4. Press the [◀AE-L/AF-L] / [▶/] button to select the block to be adjusted: time shown in the manner of YYYY: MM: DD HH:MM.
5. Press the [▲/] / [▼Info] button to adjust the value of block selected. After setting, press the (OK) button to confirm.
6. Press the (MENU) button to return the camera to photo mode.

5 Basic Operations

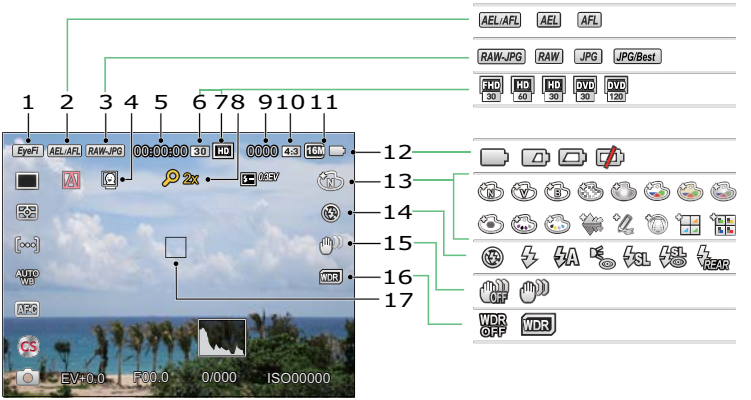
How to take pictures



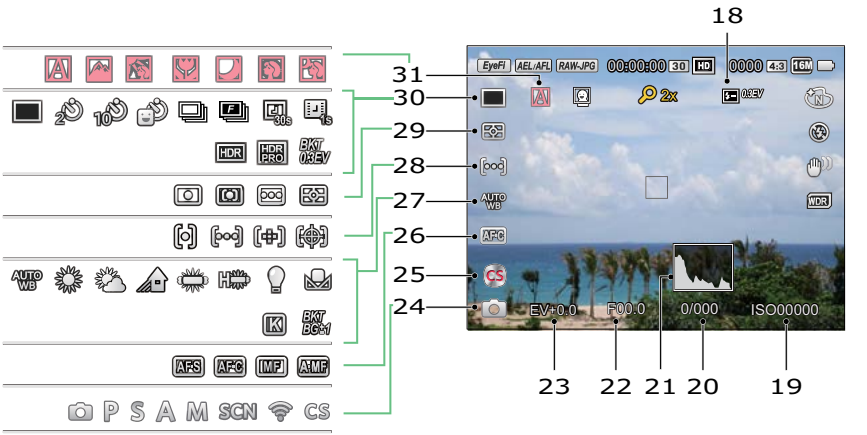


1. Hold the camera with your hands as shown in the picture and make the lens focus on the object and then frame with the LCD screen.
2. Rotate the zoom ring on lens to adjust the shooting distance.
3. Press the shutter button half way to focus. When the focus frame turns green, fully press the shutter button to complete shooting.

Overview of the screen icons in photo shooting mode



1	Eye-Fi ON (with signal)	7	Video Pixels	13	Picture Effect
2	AE/AF Lock	8	Digital Zoom	14	Flash Mode
3	Image File Quality	9	Number of Pictures in Static Mode	15	OIS
4	Human Face Detection	10	Ratio of Shooting Pixels	16	Wide Dynamic Range (WDR)
5	Maximum Record Time	11	Image Size	17	Focus Frame
6	Recording Speed (fps)	12	Battery Status		



18	Flash Exp. Comp.	23	Exposure Compensation Value	28	AF Area
19	ISO Value	24	Capture Mode	29	Expo Metering
20	Shutter Speed	25	Custom Settings	30	Single / Self-timer / Continuous Shot / HDR / Time-lapse Movie / AE Bracketing
21	Histogram	26	Focus Mode	31	Auto scene
22	Aperture Value	27	White Balance		

Overview of the Screen Icons in Movie Mode

1	Battery status
2	Number of Videos Captured
3	Continuous Recording Time
4	Video Mode

6 Mode Dial Description

Rotating the mode dial can allow you to easily switch among modes.

Auto Scene

The camera will automatically detect the most suitable scene to capture the best pictures.

Mode Name	Description
Auto	The camera will automatically adjust the exposure and focus to ensure the best possible pictures.
Landscape	For landscapes, will automatically adjust the exposure to match the background.
Backlight	When the sun or any other light source is behind you, will automatically adjust the foreground exposure to produce the best pictures possible.
Macro	To produce more detailed close-ups, will automatically engage the camera's Macro Mode and automatically focus the lens.
Night	For night scenes, will automatically increase the ISO value to compensate for low light.
Portrait	Most suitable for capturing people with focus on their faces.
Night Portrait	When you take portraits at night, or in low light conditions, will automatically adjust the exposure for people and night scenes.

Program AE **P**

For adjusting the EV and ISO values.

Shutter priority **S**

For adjusting the shutter speed, EV and ISO values. The camera may automatically set the aperture value according to the set shutter speed and ISO value to obtain a most suitable exposure value.

Aperture priority **A**

For adjusting the aperture size, EV and ISO values. The large aperture is to highlight the object focused through blurring the background, while the small aperture is for clear focusing on both the background and the object.

Manual Mode **M**

For manually setting the aperture, shutter speed and ISO value.

With BULB (shutter B) selected, press the shutter button to start exposing and then the exposure time (30min at most) will be displayed on the screen. Press again the shutter button to stop exposing and complete shooting. (Suggest using tripod.)

Please refer to the table below if any nonadjustable options in **P S A M** mode (O: Optional X: Not optional)

Mode / Options	Aperture	Shutter	EV	ISO
P	X (Display)	X (Display)	O	O
S	X (Display)	O	O	O
A	O	X (Display)	O	O
M	O	O	X (Display)	O

1. Rotate the mode dial to select the **P S A M** mode you want.
2. Press the [▶/] button to enter setting.
3. Press the [◀AE-L/AF-L] / [▶/] to select the items to be adjusted.
4. Press the [▲/] / [▼Info] to adjust parameters.

Scene Mode SCN

You can select an appropriate mode from the 14 scene modes according to the type of environment you are shooting. The camera then configures the most appropriate settings automatically.

1. Rotate the mode dial to **SCN** , then the LCD screen will display as below:

2. Press the arrow buttons to select a scene, and press the (OK) button to confirm.
3. If any need of changing the scene, please press the (OK) button and then the (MENU) button and finally the directional buttons to reselect the scene.

Panorama Mode

For shooting 360-degree landscape.

Follow the steps below:

1. Select the panorama mode ( ) and then press the (OK) button to confirm.
2. Press the arrow buttons to select a shooting direction (The right direction is used as default if you do not make any choice). 2 seconds later, the camera is ready to take pictures. You can also press the (OK) button or half press the shutter button to be ready to take pictures.
3. Compose your shot on the LCD screen and half press the shutter button to focus on the subject. After focusing, fully press the shutter button down to take picture. At this time, the process dialog of panorama mode stitching appears on the screen.

4. Rotate the camera according to the set direction. When the range of rotation meets the internal settings of the camera, the progress dialog along the indication arrow partially turns red. When it completely turns red, panorama mode shooting is finished.

Panoramic image can be played back by the method of flash playing. Please see the animation panoramic playback on page 109.

In the course of panoramic shot, you may press the shutter or (OK) button to interrupt shooting and save the video that has been shot.

Press the [▼Info] button to cancel shooting with pictures not saved.

During panorama mode shooting, when the moving direction of the camera is wrong or the angle deviates from the internal settings, the LCD shows a warning message 「Improper alignment. Please try again.」 and the current pictures taken are saved.

The movie size is 2M in the course of panoramic shot.

Handheld Night

Reduce blur when shooting low light/ illuminated scenes.

Quickly take 4 photos below 8M (including 8M) and then overlap as a clear night image.

Smile shutter cannot be used under this mode.

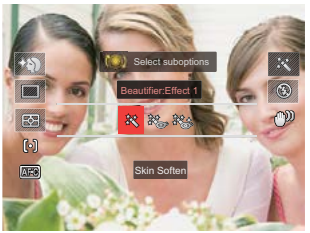
Clear night pictures also can be taken easily without the tripod.

Face Beautifier

Make skin rosy and beautiful.

Please follow the following steps to operate:

1. Select the face beautifier ( ) and then press the (OK) button to confirm.
2. Press again the (OK) button to enter options.
3. Press the [◀AE-L/AF-L] / [▶/] button to select option ( ).
4. Rolling the jog dial to select an option and then press the (OK) button to confirm.



- Effect 1: Skin Soften
- Effect 2: Skin Soften + Eye Brightening
- Effect 3: Skin Soften + Eye Brightening + Eye Enlargement

Multi Exposure

Suitable for shooting moving objects (as many as 6) in the same background.

1. Keep camera steady before shooting. Press and hold the shutter button to take 6 photos continuously when it will stop automatically. To stop shooting, release the shutter button in the midway.
2. Object shall be moved only from left to the right in order to be recorded, as it cannot be recorded in other directions.
3. Shooting effect will be influenced if object is moving too fast or too close.

The image size is fixed 5M in the course of shooting.

Cat/Dog

The camera automatically takes a picture when a dog or cat face is detected.

When a cat /dog face is detected, a white focus frame appears. The camera will take a picture and save it regardless of whether the focus is successful (if successful, there appears a green focus frame; if not, there is an orange frame).

At most, 10 dog/cat faces can be detected at one time.

Snow

For subjects in the snow. Reduce underexposure.

Party

For subjects at night without using a tripod. Capture sharp shots without blur.

Sport

For fast-moving subjects. Capture sharp action shots without blur.

Suggest using tripod.

Night Portrait

For portraits against night time scenery.

Suggest using tripod.

To take a clear picture, please keep the object still for about 1 second after shooting.

Portrait

For shooting portraits.

Under this mode, take a bokeh effect background to highlight portrait and soften the skin to obtain a better shooting effect.

Children

For kids and pets. Flash is disabled for eye protection.

Landscape

Speed adjusted for brilliant images.

This mode is not suitable to night.

Sunset

For sunsets. Capture subjects in strong sunlight.

Fireworks

For fireworks at night. Slow shutter speed adjusted for brilliant images.

Functions that can be adjusted in each scene are as below:

Scene	Adjustable Functions
Handheld Night	Self-timer */Time-lapse/Expo Metering
Face Beautifier	Self-timer/Tile-lapse/Expo Metering/Beautifier/Flash
Multi Exposure	Time-lapse/Expo Metering
Cat/Dog	Auto Shooting/Continuous Shot/Time-lapse/Expo Metering
Snow	Self-timer/Continuous Shot/Time-lapse/Expo Metering/Flash
Party	Self-timer/Continuous Shot/Time-lapse/HDR/Expo Metering/Flash
Sport	Continuous Shot/Time-lapse/Expo Metering
Night Portrait	Self-timer/Time-lapse/HDR/Expo Metering
Portrait	Self-timer/Continuous Shot/Time-lapse/HDR/Expo Metering/Flash
Children	Continuous Shot/Time-lapse/Expo Metering
Landscape	Self-timer */Time-lapse/Expo Metering
Sunset	Self-timer */Time-lapse/HDR/Expo Metering/Flash
Fireworks	Self-timer */Continuous Shot/Time-lapse/Expo Metering

* Means smile shutter is not included in the self-timer.
For continuous shot, there are only [Continuous Shot] and [Time-Lapse] for selection.

Wi-Fi Mode

Enable image transmission and remote control by connecting smart device with Wi-Fi.

Matters needing attention before use:

- Your smart device operating system version needs to be iOS 7 or higher, or Android 4.2 or higher. If not, please upgrade your smart device before using the APP.
- Please do not use in places having high intensity magnetic field, electrostatic and electric wave interference (for example near a microwave oven), which may cause failure in receiving signals.
- To maintain a connection, please keep the camera within 10 meters (32.8 feet) without signal shielding interference.
- Please do not use Wi-Fi connection functionality on a plane.
- The camera and the smart device can only be connected one to one.

Downloading the APP package:

Download a dedicated installation package from the application store (APP name: PIXPRO Remote Viewer) and then install it.

- Android devices : Search and download the App “PIXPRO Remote Viewer” in Google play, and install it following the instructions on the interface.
- iOS devices : Search and download the App “PIXPRO Remote Viewer” in App store, and install it following the instructions on the interface.

1. Rotate the mode dial to and then enter the Wi-Fi selection interface.
2. Press the [◀AE-L/AF-L] / [▶/] button to select and set options.

Wi-Fi Mode
Settings
Station
AP mode
In AP mode, the camera will act as an access point enabling another Wi-Fi device to connect to it.

- 「Settings」:
  Customize the Wi-Fi settings for the camera system.
- 「Station」:
  Use the Station Mode to connect to a "Personal Hotspot" created by your mobile device.
- 「AP mode」:
  In AP mode, the camera will act as an access point enabling another Wi-Fi device to connect to it.

Rotate the mode dial to disconnect.

AP mode

This camera may connect with your smart device through Wi-Fi.

Settings of Camera:

1. Select and press the (OK) button to enter the setting interface.
2. Press the [▲/]/[▼Info] button to select options to be adjusted, and press the (OK) button to enter the option setting interface.

- Refresh: Create a new WPA2 PSK password.
- Back: Back to previous page.

Settings of Smart Device:

1. Enable the Wi-Fi of smart device and then search surrounding wireless devices.
2. Select the name of camera SSID to be connected and then input the eight-digit number password after WPA2-PSK on the camera.
3. Click the icon of the APP to enable the APP.

Set up completion:

Once the APP is connected to the camera, functional operations can be enabled on the smart device.

Station

Enable image transmission and remote control by connecting the camera with a Wi-Fi access point created by your smart device.

1. Enable the Wi-Fi access point of smart device.
2. Select the on camera and then press the (OK) button to confirm connection with smart device.
3. Press the [▲/] / [▼Info] button to select the name of smart device to be connected and then press the (OK) button to confirm. Then, the camera enters the password input interface.

Press the [◀AE-L/AF-L] / [▶/] button to select:

- Scan: Search again surrounding wireless devices.
- ▶: Select the name of device to be connected.
- Back: Back to previous page.

4. Press the [▲/] / [▼Info] / [◀AE-L/AF-L] / [▶/] button or rolling the jog dial to select and then press the (OK) button to confirm your selection. Enter the completion of WPA2- PSK after password storage.

Meanings of Interface Icons:

Icon	Description
⌫	Delete the last letter
A/a	Switch the display of letters in capital and lowercase
← →	Move the Cursor
#!?	Switch the symbol input
␣	Input Space

5. Connect to network after storing the password.
   - If connected, the LCD screen will display as shown below:

   - If connect failed, please check Wi-Fi device and try again.

6. After connection, click the icon of the APP on the smart device, you may use it to carry out relative operation.

Display of Wi-Fi Connection Status

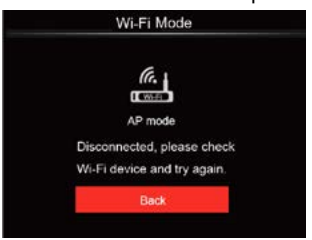
The Wi-Fi has successfully connected but APP is not enabled.

The Wi-Fi has successfully connected and APP is enabled.

For interrupting the connection:

- No: Keep Wi-Fi connected and back to previous page.
- Yes: Disconnect and back to Wi-Fi mode for interface selection.

The Wi-Fi of smart device interrupts:

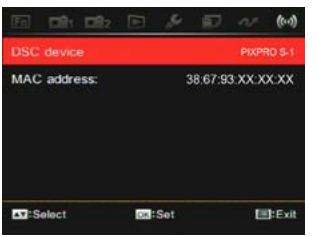


- Back: Back to Wi-Fi mode for interface selection.

Settings

The name of this camera can be changed through key stroking.

1. Select the and then press the (OK) button to enter the setting interface.
2. Press the [▲/] / [▼Info] button to select options to be adjusted and then press the (OK) button to enter the menu.



3. Press the (OK) button to confirm settings and then skip the menu.

DSC device

The default name of DSC device is「PIXPRO S-1」. Change the name of DSC device through key stroking.

For the method of input, please refer to the introduction on password input on Page 47.

MAC address

Check the wireless MAC address of this camera.

App Operating Instructions

Refer to the "PIXPRO Remote Viewer User Manual" located on the web:

Americas

http://kodakpixpro.com/Americas/support/downloads.php

Europe

http://www.kodakpixpro.com/Europe/support/multi-lang-downloads.php

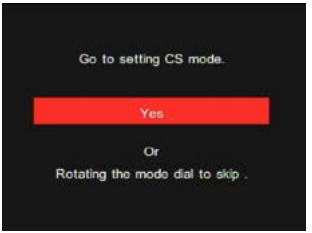
Custom Settings CS

The user can store frequently used shooting modes and parameters and switch to this mode for quick adjustment.

Settings under CS mode (use this method when there has been no prior usage of this feature or after a camera reset):

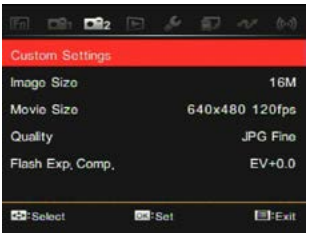
1. Rotate the mode dial to CS, and then the camera enters the setting interface as shown below:

2. As shown in the picture, press the [◀AE-L/AF-L] / [▶/] button to select a capture mode that you want to define as CS and then press the (OK) button to set this mode as the custom setting.
3. As shown in the picture, press the (MENU) button to confirm setting or to exit without setting by turning the mode dial.

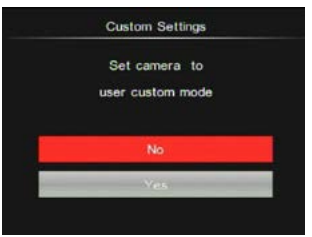


For setting under other modes (use this method to select a different custom setting):

1. Select any mode or scene mode to be stored.
2. Set your desired parameters in the current mode.
3. Press the (MENU) button and then the [◀AE-L/AF-L] / [▶/] button to select 2.
4. Select 「Custom Settings」 and then press the (OK) button to enter the menu.



5. Select「Yes」to save or「No」to cancel.



6. Turn the mode dial to switch to the custom settings (**CS**).

When the **CS** mode is used for the first time, there is no preset parameter stored in the **CS** mode.

If you want to remove the parameter setting of「Custom Settings」, please utilize the reset function as described on page 89.

7 Introduction on Function Buttons

Functions that can be enabled under each mode may be different.

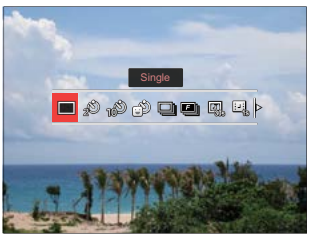
Timer/ Self-timer Button ▲/

Mode: P S A M SCN CS

For setting the single, self-timer, continuous shot, time-lapse, HDR or AE bracketing functions.

Please follow the following steps to set:

1. Press the [▲/] button to enter the setting interface.
2. Press the [◀AE-L/AF-L] / [▶/] button to select options to be adjusted.



- Single
  Capture a single shot only.
- Self-timer 2 sec
  A single picture is shot 2 seconds after the Shutter Button is pressed.
- Self-timer 10 sec
  A single picture is shot 10 seconds after the Shutter Button is pressed.
- Self-timer Smile
  Press the Shutter Button and a picture will be taken immediately after a smile is detected.
- Continuous Shot
  For taking more than one picture continuously.
- Cont. Shot-Fast (4M)
  For continuous shot with 4M pixels.

- Time-Lapse
  Take pictures with the preset interval time (30sec, 1min, 5min or 10min). Press the (≡) button to select the interval time.

- Time-lapse Movie
  For shooting for a long time with certain time intervals (1sec, 5sec, 10sec, 20sec, 30sec, 1min, 5min, 10min and 1h), so as to concentrate content over a long period of time into a short video. Press the (≡) button to select the lapse time.

- HDR (-1EV, 0EV, +1EV)
  This setting is to control the high dynamic image range in taking still pictures, with vivid effect in highlight and that the effect in dark parts can identify the outline and depth of the object.

- HDR PRO (-3EV, 0EV, +3EV)
  Using this function can take satisfactory pictures under the scene with a significant light contrast (darker or brighter).

- AE Bracketing (0.3EV, 0.7EV, 1.0EV, 1.3EV, 1.7EV, 2.0EV)
  The camera will automatically and continuously take three pictures separately with a brightness of original, darker and brighter as long as you press the shutter once. Press the (≡) button to select the range of exposure.

3. Press the (OK) button to complete setting and then enter shooting interface.

Time-lapse Movie:

① Only FHD(1920x1080) and HD(1280x720) pixels are selectable. The default pixel is FHD(1920x1080 30fps) in enabling the time-lapse movie.

② Fully press the shutter button to start shooting; press this button again to stop shooting and then the file will be merged and saved automatically.

③ 999 pictures at most can be taken.

④ Sound cannot be recorded.

The flash will not work when shooting with HDR. Suggest using tripod.

Lock Button ◀AE-L/AF-L

Mode: P S A C S

Lock the current AE and AF ranges.

This function cannot be enabled until the AE/AF Lock option is selected first with the (menu) button. See P74 for detailed operation.

Then, follow these steps to operate:

Press the [◀AE-L/AF-L] button to lock the AE value and the AF range. (Press the button again to release the lock)

Message Button ▼Info

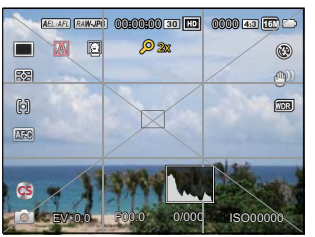
Mode: P S A M SCN CS

Display of Messages on Control Interface.

Press the [▼Info] button to switch among 4 screens.

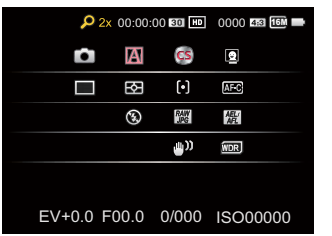
Function Message Display

Display with Grid and Histogram



No Message Display

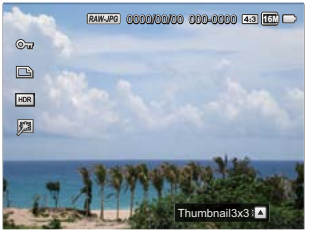
Message Display



Mode:

Press the [▼Info] button to switch among 3 screens.

Function Message Display



Detailed Message Display

No Message Display

Exposure Button ▶/

For adjusting the EV value, ISO value, shutter speed and aperture size.

Please follow the steps below to set:

1. Press the [▶/] button to enter the setting interface.

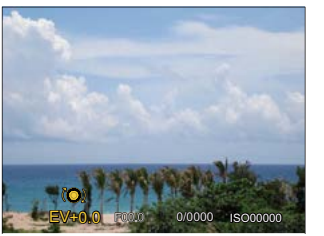
   4 options in [Exposure Button Functions]:

   - EV Value Setting
   - ISO Value
   - Shutter Speed Setting
   - Aperture Adjustment

2. Press the [◀**AE-L**/**AF-L**] / [▶/] button to select options to be adjusted.
3. Press the [▲/] / [▼**Info**] button to adjust parameters.

EV Value Setting

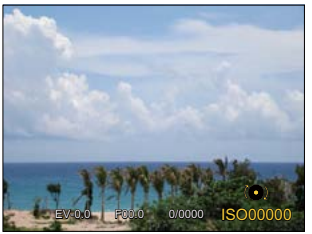
For adjusting the brightness of pictures. Applicable to conditions with large differences in contrast between the object and the background. (Adjustable under **P S A CS** mode)



The EV value may be adjusted between EV-3.0 and EV+3.0.

ISO Value

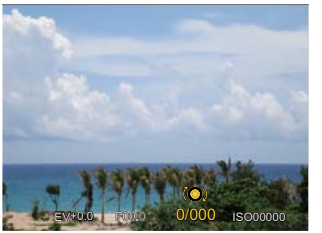
ISO allows you to set the sensitivity of the camera sensor. Please use a higher ISO value in darker places and a lower value in brighter conditions. (Adjustable under **P S A M CS** mode)



Options of ISO value: Auto, 200, 400, 800, 1600, 3200, 6400 and 12800.

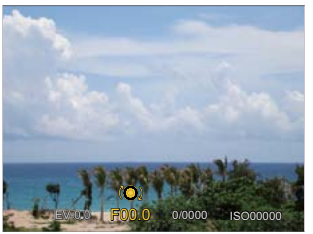
Shutter Speed Setting

For shutter speed, the camera may automatically set the aperture value corresponding to the manually set shutter speed so as to obtain a most suitable exposure value. The movement of object may be shown by adjusting the shutter speed. High shutter value can make you clearly capture the movement of fast moving object while low shutter value can allow you to take a picture for fact moving object with a strong sense of movement. (Adjustable under **S M CS** mode)



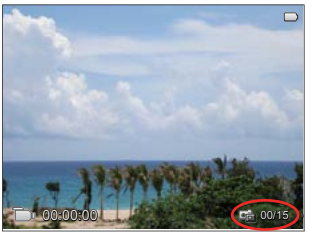
Aperture Adjustment

You can adjust the aperture size value. Selecting a large aperture opening will emphasize the point of focus and show a blurry background. A small aperture opening will keep both the background and main object in clear focus. (Adjustable under the **A M CS** mode)



Quick Record Button

In shooting mode, press the button to begin recording video.



15 pictures at most can be taken by pressing the shutter when recording.

The sizes of images taken are as below when playing them back:

FHD -> 2M

HD -> 1M

DVD -> VGA

After recording, press the button again to stop recording. The camera will store the video and return to the shooting screen.

OK Button

Mode: P S A M SCN CS

1. Press the button to enter the shooting menu under the photo mode.

   9 options in [OK Button Functions]:

   - Timer/Self-timer Mode (refer to P53)
   - Metering Mode
   - AF (Auto Focus) Area
   - WB (White Balance) Mode
   - Focus Mode
   - Picture Effect
   - Flash Mode
   - OIS (Optical Image Stabilization)
   - WDR (Wide Dynamic Range)

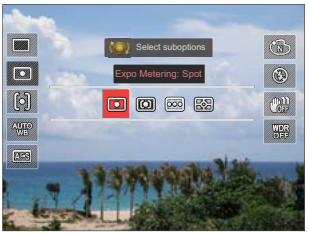
Functions that can be enabled are different under each mode.

2. Press the [▲/] / [▼Info] / [◀AE-L/AF-L] / [▶/] button to select the shooting menu to be set.
3. Rolling the jog dial to select options of the shooting menu to be set and then press the button to confirm.

Please refer to the following sections to know details of each setting.

Metering Mode

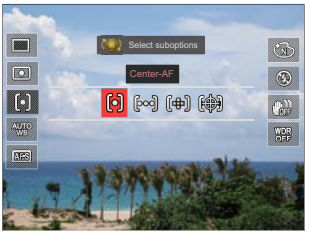
For setting the AE area.



- Spot
  For metering the block displayed in the center of the screen.
- Center
  For metering the object in the center of the screen.
- Multi
  For performing brightness distribution for the whole screen and then automatically measuring a most suitable metering. (Used to shoot images with even brightness without sharp contrast.)
- AiAE
  For automatically selecting the central and surrounding metering to weight a proper metering value.

AF (Auto Focus) Area

In different photo shooting modes, you can select different focus methods.



- Center-AF
  The focus frame appears on the center of the LCD screen to focus on the subject.
- Multi-AF
  The camera automatically focuses the subject in a wide area to find the focus point.
- Spot Focus
  Select a single focus point within the scope of focus.

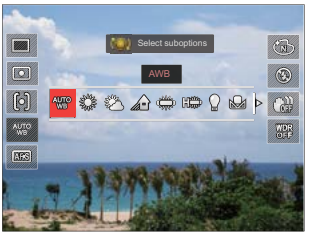
- Object Tracking
  Smart tracking of the object in motion under the focusing shooting.

After enabling spot focus, rolling the jog dial to adjust the position of focus point in the screen.

The function of object tracking cannot be enabled until successful focus. For tracking the focus, you need to keep the shutter semi-pressed.

WB (White Balance) Mode

The WB function allows the user to adjust color temperatures under different light sources, so as to confirm that the color can be presented properly.



- AWB
  For auto shooting based on lighting conditions.
- Daylight
  For outdoor shooting on a sunny day.
- Cloudy
  For outdoor shooting on a cloudy day.
- Shadow
  For shooting under outdoor shadow on a sunny day.

- Fluorescent
  For indoor shooting under fluorescent lights.
- Fluorescent H
  For indoor shooting under fluorescent H lights.
- Incandescent
  For indoor shooting under incandescent lights.
- Manual WB
  For changing the WB based on current light source. Press the (MENU) button to set.
- Color Temp. (1900K~10000K)
  Press the (MENU) to enter and rolling the jog dial to adjust the color temperature value; then, press again the (MENU) button to confirm your selection.
- WB Bracketing
  Press the shutter button once to take three photos with different WB settings. (Adjustable under the **P S A M** mode)

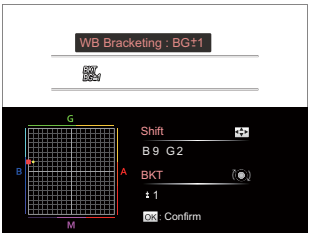
WB Bracketing:

Press the (MENU) button to enter options and then press the directional buttons to adjust the shift and roll the jog dial to adjust the BKT value (0, 1 and 2).

Rotate clockwise to adjust X axis (B-A). BKT value

Rotate counterclockwise to adjust Y axis (G-M). BKT value

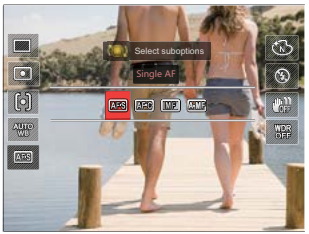
Press the (OK) button to confirm your settings.



WB bracketing is for setting the bracketing range. Shift to both sides for 3 spaces at most. If at the page border, shift only to the other side and 2 photos can be taken. If no shift, only one photo can be taken.

Focus Mode

For auto and manual focus settings.



- AF-S Single AF
  Applicable to shoot relatively still landscape; semi-press the shutter first and release it after the focus is complete.
- AF-C Cont. AF
  Applicable to shoot moving objects (such as moving persons). Perform continuous focus when the shutter is semi-pressed.
- MF Manual Focus
  Manually rotate the focus ring to obtain a clear focus.
- A-MF Auto + Manual Focus
  After auto focus, you may use the focus ring to manually adjust the focus as needed while semi-pressing the shutter button.

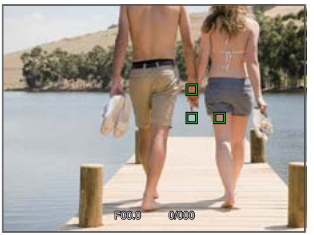
Manual focus works only under the **P S A M CS** mode.

The MF assist needs to be enabled in the menu before you need use the manual focus function. (See P79 for details)

After enabling manual focus:

If the lens focus ring is operated or rolling the jog dial, the focus enlargement frame will appear on the LCD screen. After clear focus is achieved through manual adjustment, press the OK button to close the focus enlargement frame. The camera will return to the normal shooting screen. Semi-pressing the shutter button will have no effect; you need to fully press the shutter button to take a normal photo.

The focus frame displayed after enabling the auto + manual focus depends on the settings of AF area (center-AF/multi-AF).

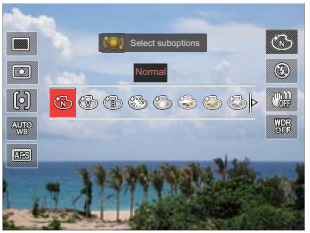


Semi-press the shutter button for auto focus and then rotate the lens focus ring to focus on areas enlarged on the screen. Once the area is in focus, press the shutter button to capture the image. If you wish to return to normal framing instead, press the (OK) button to close the focus enlargement frame.

When returning to normal framing mode, the camera will do an auto focus the first time the shutter button is pressed.

Picture Effect

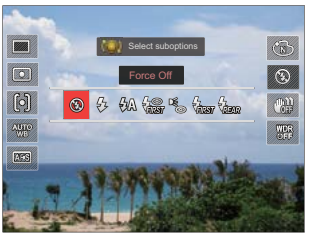
Picture effect allows user to select different color effects.



- Normal
- Vivid
- Black and White
- Dreamy
- Vignetting
- Ektachrome
- Kodachrome
- Kodacolor
- Salon
- Punk
- Negative
- Reflection
- Sketch
- Fish Eye
- 4 Grids - Stylish (2M)
  Four combined effects: Fine + Warm Yellow + New Japanese + Cold Green
- 4 Grids - Partial Color (2M)
  Four partial colors of blue, yellow, green and red to form combined effects.

Flash Mode

The flash provides supplemental light for the scene. The flash is usually used when shooting against the light to highlight the object; it is also suitable for metering and shooting in darker scenes to improve the exposure. (For installation steps of the flash, please refer to P23.)



- Force Off
  Flash is turned off.
- Fill Flash
  For fill flash at the moment of taking a picture.
- Flash Auto
  Camera flash goes off automatically based on existing light conditions.
- Red-Eye Reduction
  The camera emits a brief pre-flash before the picture is taken to reduce red-eye effects.
- Slow Sync.
  This allows you to take pictures of people at night that clearly show both your subjects and the night time backdrop. The use of a tripod is recommended when shooting with this setting.
- Slow Sync. + Red-Eye Reduction
  The camera uses both slow sync. And red-eye reduction in flashing.

- Rear curtain sync
  Press the shutter to make it on normally, and then the flash gives a flash to expose at the moment that the shutter closes. (Mainly used to shoot fast-moving objects.)

If the flash is disconnected or closed, the default mode is disabled and isn't an option.

OIS (Optical Image Stabilization)

This mode can help reduce photo blur caused by unintentional hand shake.

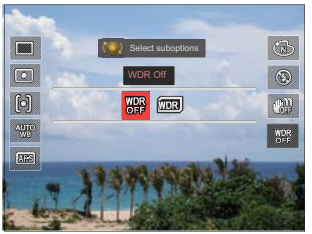
- OIS: Off
- OIS: On

Use Stabilization Mode in dark environments or when using a slower shutter speed.

The effect of OIS may be unsatisfactory when shooting with fierce shake of camera (e.g. in the running vehicle).

WDR (Wide Dynamic Range)

When the camera detects that there is a big contrast in brightness between scenes and such scenes are against the light, it will automatically adjust the brightness and saturation to capture an image that better represents the scene. (Adjustable under the **P S A M C S** mode)



- WDR OFF WDR Off
- WDR WDR On

Menu Button

Mode: P S A M SCN CS

1. Press the button to enter the menu.
2. Press the [◀AE-L/AF-L] / [▶ /] button to select.

   8 options in [Menu]:

   - Fn Settings Fn
   - Shoot Settings 1 1
   - Shoot Settings 2 2
   - Playback Menu
     (See P100 for details)
   - Normal Settings
   - File & Firmware Settings
   - Connection Settings
     (See P112 for details)
   - Wi-Fi (See P49 for details)

Functions that can be enabled are different under each mode.

3. Press the [▲/] / [▼Info] button to select the setting options and press the OK button to enter the menu.
4. Press the [▲/] / [▼Info] button to select and press the OK button to confirm.

Please refer to the sections below to know details of each option.

Fn Settings Fn

3 options in [Fn Settings]:

- Fn1
- Fn2
- AE/AF Lock

Fn1/Fn2 Settings

This function can be used to customize the quick access with Fn1 or Fn2 button.

After saving the functions of Fn1 or Fn2 button, the camera goes back to the shooting status. Pressing Fn1 or Fn2 button can quickly enable relative functions.

Button	Functions (Referred Pages)
Fn1/Fn2	Image Size (P81)
	Movie Size (P82)
	Quality (P83)
	Focus Mode (P65)
	AF Area (P62)
	Metering Mode (P62)
	Flash mode (P69)
	Picture Effect (P68)
	Touch-up (P40)
	WB Mode (P63)
	WDR (P71)
	OIS (P70)

By default, Fn1 is set as picture effect and Fn2 is set as AF Area.

AE/AF Lock

For simultaneously locking current AE value and AF range.

- AE Lock
  For locking the current AE value.
- AF Lock
  For locking the current AF value.
- AE/AF Lock
  For simultaneously locking the current AE value and the AF range.

Shoot Settings 1

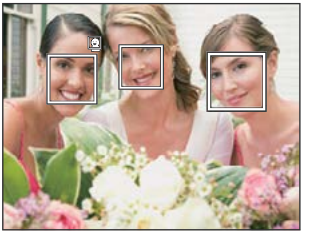
6 options in [Shoot Settings 1]:

- Face Detection
- AF Assist Beam
- Date Imprint
- Quick Review
- Digital Zoom
- MF Assist

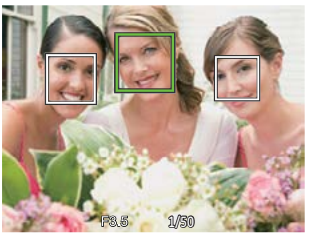
Face Detection

For detecting and focusing on faces to make all faces as clear as possible in photo mode.

1. Hold the camera steadily and then focus on the object to detect its face. A focus frame will appear at the face on the screen when a face is detected.



2. Aim at the object and then semi-press the shutter button to focus.



3. Press the shutter button to take a picture.

The closed eyes detection is usually on. If the camera detects in the course of quick review there is a face with eyes closed, a prompt of closed eyes will appear .

AF Assist Beam

In a darker environment, AF Assist Beam can be turned on for better focus.

- Off
- On

Date Imprint

Include a Date/Time imprint on the photo image.

- Off
- Date
- Date/Time

Quick Review

This option enables a brief review of images immediately after capture. Each picture will be displayed on the LCD screen per the selections below.

- Off
- 2 sec
- 5 sec
- Playback

If you select playback, the camera will directly enter playback mode after each time of picture taking.

The available choices vary depending on the shooting mode.

O-the number of seconds can be set; X-the number of seconds cannot be set.

	Quick Review for 2 seconds or 5 seconds	Quick Review Playback	Closed Eyes Detection *
Cat/Dog Self-timer	Fixed 2 sec	X	X
Smile	Fixed 2 sec	X	O
Panorama	O	O	X
Continuous Shot	Fixed 2 sec	X	X
Cont. Shot-Fast	Fixed 2 sec	X	X
Con. Time-lapse Shot	Fixed 2 sec	X	X
HDR	O	O	O
WDR	O	O	O
Color	O	O	O
WB Bracketing	O	O	X
EV Bracketing	Fixed 2 sec	X	X

* Closed eyes detection requires face detection to be enabled.

Digital Zoom

This setting is for adjusting digital zoom. If this function is disabled, only optical zoom can be used.

- Off
- 2x
- 4x

MF (Manual Focus) Assist

Enables an enlarged focus window during the use of manual focus to provide the user better visibility for focus control. (Adjustable under the **P S A M** mode)

- Off
- On

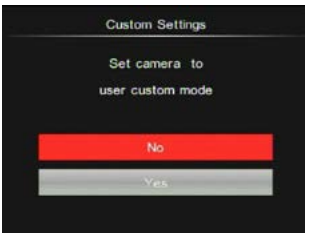
Shoot Settings 2 2

6 options in [Shoot Settings 2]:

- Custom Settings
- Image Size
- Movie Size
- Quality
- Flash Exp. Comp.
- Image noise reduction

Custom Settings

Custom Settings stores the current photo shooting mode and its parameters. The stored mode and parameters are directly invoked in Custom Settings mode.



- No
- Yes

Image Size

The size setting refers to the image resolution in pixels. A higher image resolution allows you to print that image in larger sizes without degrading the image quality.

- 16M: High quality printing
- 14M-3:2: Full size printing
- 12M-16:9: display
- 10M: Poster printing
- 4M: A3 printing
- 3M: A4 printing
- 2M-16:9: 4"x 6" printing
- VGA: E-Mail

The larger the number of recorded pixels, the larger the file size and the fewer files that can be saved on your memory card.

Movie Size

Set the image resolution used during video recording.

Movie Size:

- 1920x1080: record with Full HD. The aspect ratio is 16:9.
- 1280x720: record with HD. The aspect ratio is 16:9.
- 640x480: record with standard definition. The aspect ratio is 4:3.

Total time of video recorded for each setting:

No.	Image Pixel	Frame (fps)	Recommendation	Recording time (approximate)	
				(4GB)	(8GB)
1	1920x1080 *	30	Class 6	30min	60min
2	1280x720 *	60	Class 6	32min	66min
3	1280x720 *	30	Class 4	59min	119min
4	640x480	30	Class 4	106min	213min
5	640x480	120	Class 6	54min	108min

* The longest recording time is 29 minutes at one time.

When recording in higher pixel resolutions for extended periods of time, the camera may get warm. This is not a camera malfunction.

If 640x480 30fps is selected, you may be required to save the video file in another SD card when it reaches 4GB.

When the video format is set as 640x480 (120fps), shooting time is 30 seconds, playback time is 2 minutes.

Sound recording is disabled when 640x480 120fps is chosen.

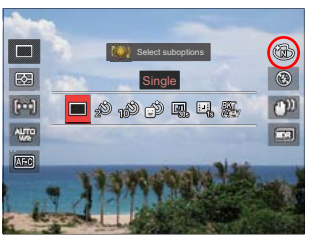
Quality

The Quality Setting can be used to adjust the image compression ratio.

- RAW+JPG
  Creates two images: one in RAW and the other in JPG best. (Average file size under 16M image size: 29.1MB+6.0MB)
- RAW
  The image file will contain more data that can be used for the purpose of editing on a computer. (Average file size under 16M image size: 29.0MB)
- JPG Fine (average file size under 16M image size: 2.6MB)
- JPG Best (average file size under 16M image size: 5.9MB)

If RAW or RAW+JPG is selected, the settings of Picture Effect, Continuous Shot, Cont. Shot-Fast, HDR, HDR PRO and AE Bracketing cannot be adjusted.

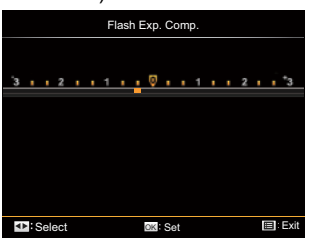
Press the (OK) button



The RAW file format provides lossless compression of the image data, which is not processed by the camera. The RAW file may be opened and modified using the image processing software, PhotoStudio Darkroom, that is located on the CD-ROM included with this camera. PhotoStudio Darkroom supports Windows vista/7/8 and iOS (v10.6.8-v10.8).

Flash Exp. Comp.

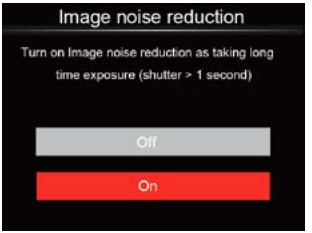
The flash exposure compensation is for adjusting flash volume to improve the brightness in the background of the object. (Range from -3.0EV to +3.0EV, with 1/3EV as the increment).



The flash exposure compensation cannot be adjusted if the flash is disconnected or closed.

Image noise reduction

Image noise reduction can reduce image noise generated due to long exposures. (Adjustable under the **P S A M** mode)



The image noise reduction function works only when used to obtain still pictures.

After the image noise reduction function is enabled to photograph with a long exposure, the camera will photograph twice automatically, and the image processing time will be longer.

Normal Settings

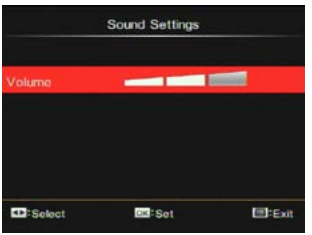
6 options in [Normal Settings]:

- Sound Settings
- Power Saver
- LCD Brightness
- Language
- World Time
- Date & Time

Sound Settings

With this setting you may adjust the sound volume.

Press the [◀**AE-L**/**AF-L**] / [▶/] button to adjust the volume and then press the (OK) button to confirm your setting.



Power Saver

This setting allows you to save power and get the maximum possible running time for your camera's batteries. Follow the steps below to turn the LCD screen and camera off automatically after a consecutive period of inactivity.

- Auto
- Normal
- Best

Power Saver	LCD power off time	Turn off time
Auto	3 min	5 min
Normal	1 min	3 min
Best	30 s	1 min

LCD Brightness

Use this setting to adjust the brightness of your LCD screen.

Press the [◀AE-L/AF-L] / [▶] button to adjust the brightness of screen and then press the (OK) button to confirm your setting.

Language

Refer to the “Reset your language” section on page 30.

World Time

When traveling abroad, you may use this function to display local time on the screen.

1. Press the [▲] / [▼Info] button to select the places of departure ( ) and destination ( ) .
2. Press the [◀AE-L/AF-L] / [▶] button to select a city with same time shown in the field and then press the (OK) button to confirm your setting.

Date & Time

Refer to the “Reset Date & Time” section on page 31.

File & Firmware Settings

6 options in [File & Firmware Settings]:

- Format
- Copy to Card
- File Numbering
- Reset Settings
- FW Version
- Cleaning Mode

Format

Please note: formatting enables you to delete all contents in the memory card and built-in memory, including protected photo and movie files.

1. Press the [▲/] / [▼Info] button to select [Yes] or [No] and then press the (OK) button to confirm your setting.

2. If you select「Yes」, the camera formats its memory.

If there is no memory card in the camera, the built-in memory will be formatted; if there is a memory card, it will be formatted only.

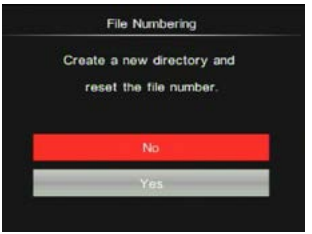
Copy to Card

Use this setting to copy the files stored in the internal memory to a memory card.

If there is no card available in the camera, this function will not be displayed.

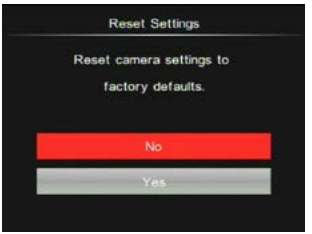
File Numbering

After you take a picture or video clip, the camera will save it with a sequential number. You can use this to reset the file numbering to 0001.



Reset Settings

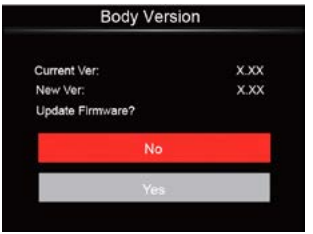
Use this setting to restore the camera to its original default settings.



FW Version

You may use this option to check the camera current FW version.

If there is a new version of FW on the memory card, you will be presented with the opportunity to update per the image below:



Cleaning Mode

For clearing dust and debris on the sensor through high speed vibration.

Auto cleaning

Press the Power button to turn the camera on after selecting「On」and then the camera starts automatically cleaning the sensor.

Clean now

The camera will perform instant and automatic cleaning after you select 「Yes」. It will shut itself down after completion of cleaning.

For the best effect, place the camera on a flat surface in a vertical position.

Even if no lens is installed, the clean sensor function can work normally.

Dust that could not be removed by the automatic sensor cleaning can be removed manually with a blower, etc. Before cleaning the sensor, detach the lens from the camera.

① As the image sensor surface is extremely precise, please clean the sensor with care.

② Please don't use compressed air or gas to clean the sensor. The high pressure air can damage or freeze the sensor.

③ If there is some residue that cannot be removed with blowing, suggest sending the sensor to a maintenance center for cleaning.

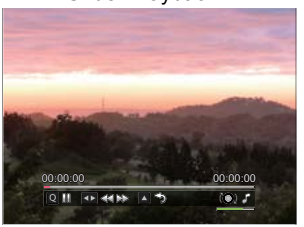
8 Viewing Photos and Videos

For viewing taken photos and videos on the LCD screen:

1. After pressing the (▶) button, the last photo or video clip taken will be displayed on the LCD screen.
2. Press the [◀AE-L/AF-L] / [▶/] button to scroll through pictures or videos saved in memory card or built-in memory.
3. To play a selected video clip, press the (OK) button to enter the Movie Playback Mode.

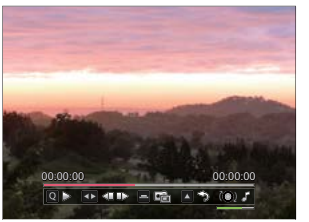
An operation guide appears on the screen when playing back a video. Press the appropriate buttons to enable the corresponding functions.

Under Playback



	Pause
	Rewind
	Fast Forward
	Cancel Play

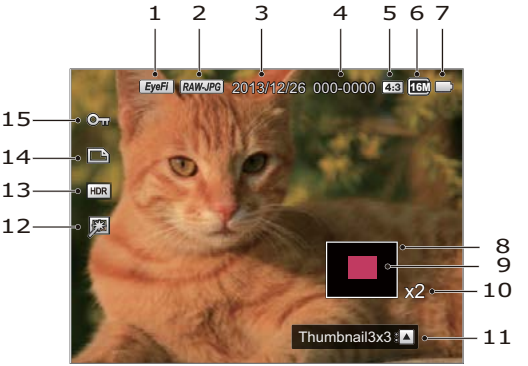
Paused



	Clockwise Volume Up Counterclockwise Volume Down
	Volume
	Mute

	Play
	Frame Backward
	Frame Forward
	Capture Videos
	Cancel Play

Description on Screen Icons under Playback Mode

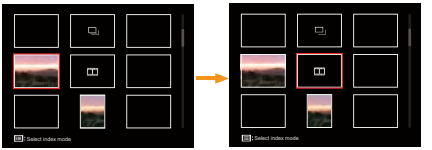


1	Eye-Fi ON (with signal)	9	Current Display Area
2	Image File Quality	10	Image Zoom Ratio
3	Capture Date	11	Index Prompt
4	File Name	12	Touch-up
5	Shooting Pixel Ratio	13	HDR
6	File Shooting Pixel	14	DPOF File Icon
7	Battery Status	15	File Protection Icon
8	Image Area		

Thumbnail View

For displaying thumbnails of pictures and videos on the screen while in playback mode.

1. Press the [▲/] button to display 3x3.
2. When the 3x3 thumbnails are displayed, you may press the arrow button to select one picture or video to view.



3. Press the (OK) button to restore it to the original size.
4. Press the (MENU) button to select index mode.

4 options in [Index Mode] :

- Single Index
- Date Folder
- Cont. Group
- Slide Show

When the icon appears, it means this is a video file. (Including the time-lapse movie files)

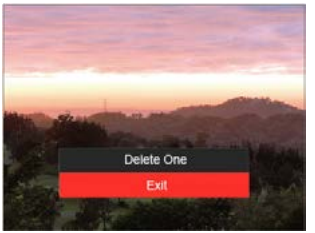
When the icon appears, it means this is a continuous group file.

Photos and Video Deletion

Under the single playback mode, you may press the 🗑 button to delete pictures and videos.

To delete photos or videos:

1. Press the (▶) button to enter playback screen.
2. Press the [◀AE-L/AF-L] / [▶/] button to select pictures or videos to be deleted.
3. A prompt of deletion is displayed on the screen after press the 🗑 button.



4. Press the [▲/] / [▼Info] button to select [Delete One] or [Exit] and then press the (OK) button to confirm.

Erased photos/video clips cannot be recovered.

Please refer to page 101 for instructions on deleting more than one image at a time.

Playback OK Menu

Mode:

1. Press the button to enter PLAYBACK screen and select a picture and then press the button to enter the menu.

   5 options in [Playback OK Menu]:

   - Rotate
   - Color
   - HDR
   - Touch-up
   - Resize

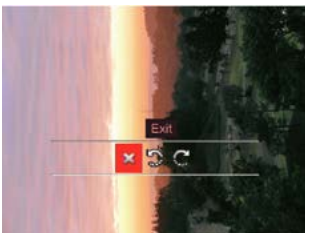
2. Press the [▲/] / [▼Info] button to select the playback to be set and press the button to enter.

3. Press the [◀AE-L/AF-L] / [▶/] button to select an option and press the button to confirm.

Please refer to the sections below to know details of each setting.

Rotate

You can use this setting to change the orientation of the picture.



- Exit
- Turn Left
- Turn Right

Videos, Time-lapse Movie and panoramic pictures cannot be rotated.

The rotated picture file will replace the original photo.

Color

This setting allows you to change the picture color effect. The file is saved as a new photo and stored in memory together with the original photo.

- Exit
- Vivid
- Black and White
- Dreamy
- Vignetting
- Salon
- Punk (4M)
- Negative (8M)
- Reflection
- Fish Eye
- 4 Grids - Stylish (2M)
  Four combined effects: Fine + Warm Yellow + New Japanese + Cold Green
- 4 Grids - Partial Color (2M)
  Four partial colors of blue, yellow, green and red to form combined effects.

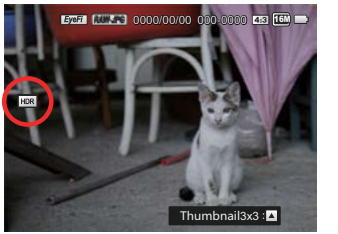
HDR

With the HDR function, pictures that are overexposed may be corrected to optimize the highlights and lowlights captured to more accurately represent the actual scene.

- Exit
- HDR HDR

HDR is not applicable to panoramic pictures.

Select [HDR] with HDR:



Pictures with HDR touch-up will be saved as new files in the memory together with originals.

Touch-up

The playback beauty feature allows for beautification using three individual effects.

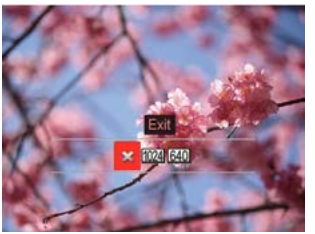
- Exit
- Red-Eye Reduction
- Skin Soften
- Eye Brightening
- Eye Enlargement

Using the beautifier capture mode allows you to select from single, two, or all three effects combined.

Select [ ] with touch-up:

Resize

This setting allows you to resize a picture to a particular resolution and saves it as a new picture.



- Exit
- 1024 Resize to 1024x768
- 640 Resize to 640x480

Only for adjusting pictures with high resolution to those with low resolution.

Sizes of photos taken in panorama mode or rotated cannot be adjusted.

Playback Menu

6 options in [Playback Menu]:

- Auto Rotate
- Delete
- Protect
- DPOF
- Trim
- Play Slide Show

Auto Rotate

Pictures taken with enabled auto rotate will automatically rotate and always keep correct orientation when playing them back.

- Off
- On

Delete

You may delete pictures or video files.

- One
  Delete one photo or video.
- Date Folder
  Delete all photos in the Date Folder.
- Cont. Group
  Delete all photos in the Cont. Photo Folder.
- All
  Delete all photos or videos.

The indicator means a file is protected. File protection must be removed before a file can be deleted.

When one photo in the Cont. Photo and Date Folders is protected, it will be kept but all other photos will be deleted.

Protect

You may lock pictures and video files to avoid deletion by mistake.

- One
  Lock the selected photo or video if they are unprotected; unlock the selected photo or video if they are protected.
- Date Folder
  Protect all photos in the Date Folder.
- Cont. Group
  Protect all photos in the Cont. Photo Folder.
- All
  Lock all photos or videos.
- Reset
  Cancel all locked photos or videos.

DPOF

The DPOF feature allows you to compile and select a group of pictures that you would like to print and will save your selection on the memory card so that you can use the memory card to print without having to individually specify the photos you want to print.

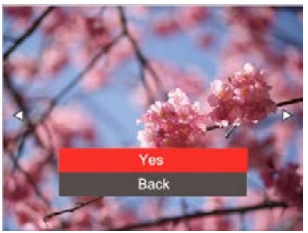
- One
- All
- Reset

The printer that supports DPOF is needed for printing.

Trim

The Trim Setting allows you to crop photos and save them as new pictures.

1. Select [Yes] to confirm trimming; press the [**Fn1**] to select the aspect ratio and press the [▲/] / [▼**Info**] / [◀**AE-L**/**AF-L**] / [▶/] button to adjust the part you want to trim.



2. Press the (OK) button and the「Save change?」prompt appears. Select「」to change and save the picture. Select「」to cancel changes and return to the trim prompt screen.

The image cannot be clipped/trimmed again once it has been clipped to 640X480.

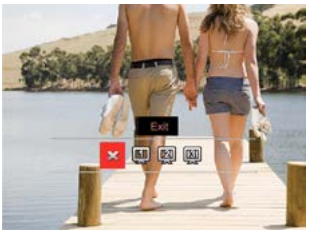
Videos, RAW files and those under protection cannot be trimmed.

The picture after trimming cannot be trimmed again.

Play Slide Show

This setting allows you to view all the stored images as a slideshow.

- All Files
  To display and play back all images in memory card.
- Still Captures
  To display and play back images of photo files in memory card.
- Videos
  To play back movies on memory card.
- Cont. Group
  To only play back images arranged by cont. group in memory card.



Press the [◀**AE-L**/**AF-L**] / [▶/] button to select options to be set and then press the (OK) button to enter the menu.

- Exit
- Type 1: Slow-in and slow-out
- Type 2: Separate in middle and move off to the left and right
- Type 3: Separate into blocks and spin in

If no continuously shot files are saved in the memory, the camera will give a warning message when you select the mode of continuous group for quick review.

Defaults of playback options under each mode:

Menu	Mode	Playback		
		Static Image	Video Panorama	Video
Rotate	Adjustable?	O	X	X
	Default	Off	Off	Off
Resize	Adjustable?	O	X	X
	Default	Off	Off	Off
Color	Adjustable?	O	X	X
	Default	Off	Off	Off
Touch-up	Adjustable?	O	X	X
	Default	Off	Off	Off
HDR	Adjustable?	O	X	X
	Default	Off	Off	Off
Auto Rotate	Adjustable?	O	O	O
	Default	On	On	On
Delete	Adjustable?	O	O	O
	Default	One	One	One

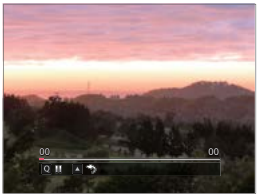
Menu	Mode	Playback		
		Static Image	Video Panorama	Video
Slide Show Play Type	Adjustable?	O	O	O
	Default	All Images	All Images	All Images
Slide Show Play Effect	Adjustable?	O	O	O
	Default	Effect 1	Effect 1	Effect 1
Protect	Adjustable?	O	O	O
	Default	One	One	One
DPOF	Adjustable?	O	O	X
	Default	One	One	One
Trim	Adjustable?	O	X	X
	Default	Back	Back	Back

Continuous Capture Group Playback

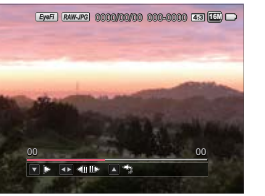
Playback of Images in Fast (4M) Continuous Group:

1. Press the (▶) button to enter playback screen.
2. Press the [◀**AE-L**/**AF-L**] / [▶/] button to select pictures in continuous group.
3. Press the (OK) button to start playback.

Cont. Group



Playing



Pause

Q	Pause
△	Cancel Play (back to full size playback for continuous group)

Playing

▽	Play
◁	Previous photo (loop available only in continuous group)
▷	Next photo (loop available only in continuous group)
△	Cancel Play (back to full size playback for continuous group)

Pause

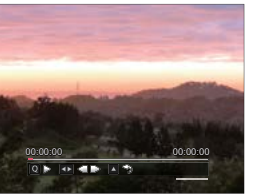
Time-lapse Movie Playback

For playing back time-lapse movie in continuous group:

1. Press the (▶) button to enter playback mode.
2. Press the [◀AE-L/AF-L] / [▶/] button to select time-lapse pictures.
3. Press the (OK) button to start playing back.

Time-lapse Movie

Playing



Pause

Q	Pause
◁	Rewind
▷	Fast Forward
△	Cancel Play

Playing

Q	Play
◁	Frame Backward
▷	Frame Forward
△	Cancel Play

Pause

Animation panorama play

Panoramic animation playing is to play full size image in accordance with the shooting direction. After playing, it will automatically return to the static screen of panoramic image.

1. Press the (▶) button to enter playback screen.
2. Press the [◀AE-L/AF-L] / [▶/⚙] button to select panorama videos.
3. Press the (OK) button to play in selected shooting direction.

Video Panorama

Playing

Pause

Q	Pause
△	Cancel Play

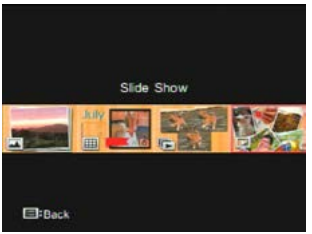
In the process of panoramic animation playback, press the ▲/⏲/⧉ button to stop playing and return to the playback screen.

Picture will not be rotated during panorama play or pause.

Slideshow

This setting allows you to view all the stored images as a slideshow.

1. Press the ▶ button to enter playback screen.
2. Press the [▲/] button to switch displaying 3x3 and then press the ☰ button to select the index mode.
3. Press the [◀AE-L/AF-L] / [▶/] button to select slide show playback and then press the OK button to confirm.



4. Press the [◀AE-L/AF-L]/[▶/] button to select play effect and then press the OK button to confirm.

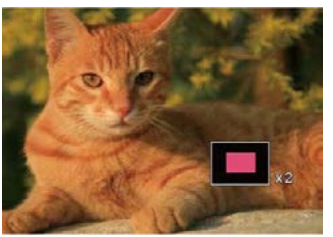
Slide Show

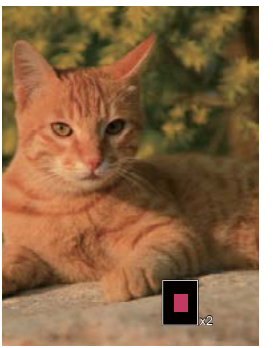
Playing

Using Zoom Playback (for still pictures only)

In playing back pictures, you may press the **Fn1** button to zoom in on them for 2 to 8 times.

1. Press the ▶ button to enter playback screen.
2. Press the [◀AE-L/AF-L] / [▶] button to select a picture to be zoomed in for view.
3. Press the **Fn1** button to enter zoom-in screen.
4. Rolling the jog dial clockwise to zoom in and counterclockwise to zoom out.
5. The bottom right corner of the screen will display the number of times and area of the photo zooming operation.





6. Press the [▲ /] / [▼Info] / [◀AE-L/AF-L] / [▶] button to shift and select the part to be zoomed in and viewed.
7. Press the OK button to return the image to its original scale.

9 Connection Settings

4 options in [Connection Settings]:

- USB
- TV-System
- Eye-Fi
- HDMI CEC Control

Connection to a Computer

You can use a USB cable to connect the camera and copy (transmit) photos to a computer, printer or other device.

Setting the USB Mode

The camera's USB port can be set to connect with either a computer or a printer. The following steps will allow you to ensure that the camera is correctly configured to connect with a PC.

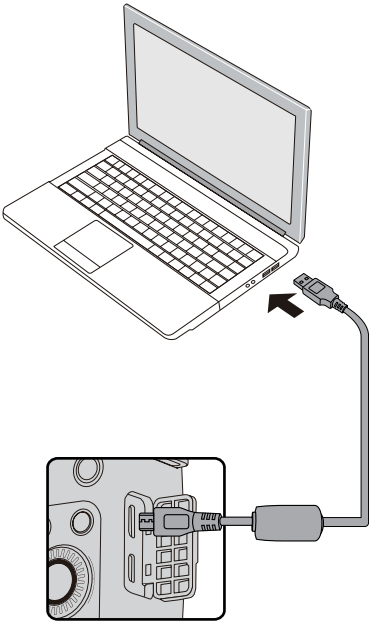
1. Press the [▲/] / [▼Info] button to select 「USB」 and then press the (OK) button to enter the menu.
2. Press the [▲/] / [▼Info] button to select 「PC」 and then press the (OK) button to confirm.

Transferring files to your computer

The computer will automatically detect the camera as a removable drive. Double-click the My Computer icon on the desktop to locate the removable drive and to copy folders and files in the drive to a directory on your PC as you would copy any typical folder or file.

Follow the steps below to connect the camera to a computer.

1. Make sure both the camera and computer are turned on.
2. Connect one end of the supplied USB cable to the USB OUT port on your camera.
3. Connect the other end of the cable to an available USB port on your computer.
4. After the transmission is complete, disconnect the USB cable according to the instructions specifying how to safely remove USB devices.



Connecting to a PictBridge Compatible Printer

PictBridge technology allows printing the photos saved in the memory card by the printer.

To find out if a printer is PictBridge compatible, simply look for the PictBridge logo on the packaging or check the owner's manual for specifications. With the PictBridge function on your camera, you can print the captured photos directly to a PictBridge compatible printer using the supplied USB cable, without the need for a PC.

Setting the USB Mode

The camera's USB port can be set to connect with either a PC or a Printer, the following steps will ensure that the camera is correctly configured to connect with a Printer.

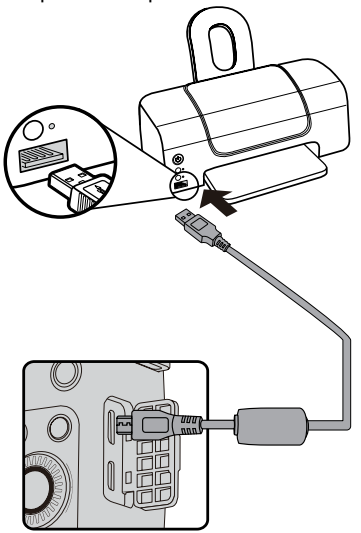
1. Press the [▲/] / [▼Info] button to select 「USB」 and then press the (OK) button to enter the menu.
2. Press the [▲/] / [▼Info] button to select 「Printer」 and press the (OK) button to confirm.

After the camera is reset, it will switch to PC mode automatically from USB mode.

See "PictBridge" section on page 116.

Connecting to your Printer

1. Make sure both the camera and computer are turned on.
2. Connect one end of the supplied USB cable to the USB port on your camera.
3. Connect the other end of the cable to the USB port on the printer.



If the camera is not connected to a PictBridge compatible printer, the following error message will appear on the LCD screen.

The error message above will also appear if the USB mode is set incorrectly, in which case you should disconnect the USB cable, check the USB mode settings, ensure that the Printer is turned on, and then try connecting the USB cable again.

Using the PictBridge Menu

After setting the USB mode to Printer, the PictBridge Menu will appear.

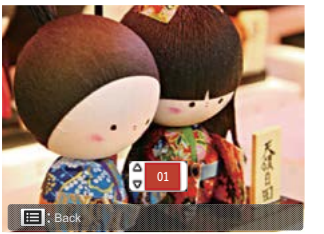
Press the [▲/] / [▼Info] button to select a menu item and press the (OK) button to enter the item.

Refer to the following sections for more detailed information on each setting.

Print (with Date)

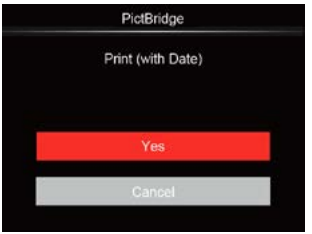
If you have set the date and time on your camera, the date and time will be recorded and saved with each photo you take.

1. In the PictBridge menu, select 「Print (with Date)」 and the screen as shown below appears.



2. Press the [◀AE-L/AF-L] / [▶/] button to select a photo to be printed.

3. Press the [▲/] / [▼Info] button to select the number of copies for the currently displayed photo.
4. Press the (OK) button and the following screen will appear.

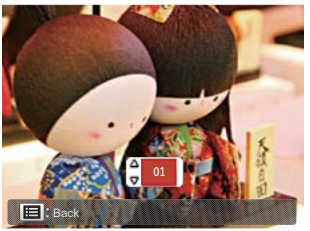


5. Select「Yes」and press the (OK) button to confirm; select「Cancel」to cancel printing.

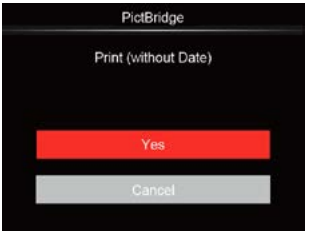
Print (without Date)

Use this setting to print the photos without dates on them.

1. In the PictBridge menu, select「Print (without Date)」and the screen as shown below appears.



2. Press the [◀AE-L/AF-L] / [▶/] button to select a photo to be printed.
3. Press the [▲/] / [▼Info] button to select the number of copies for the currently displayed photo.
4. Press the (OK) button and the following screen will appear.



5. Select「Yes」and press the (OK) button to confirm; select「Cancel」to cancel printing.

Print Index

You can print all photos in the camera via this function.

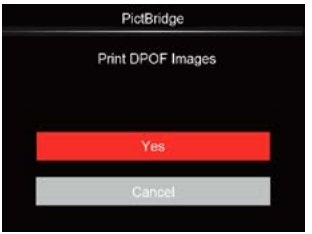
1. In the PictBridge menu, select「Print Index」and the screen as shown below appears.

2. Select「Yes」and press the (OK) button to confirm; select「Cancel」to cancel printing.

Print DPOF Images

To use DPOF printing, you must select your photos for printing using the DPOF settings beforehand. See “DPOF” section on page 103.

1. In the PictBridge menu, select「Print DPOF Images」and the screen as shown below appears.



2. Select「Yes」and press the (OK) button to confirm; select「Cancel」to cancel printing.

Exit

Select「Exit」to exit the PictBridge menu. At this time, the message「Remove USB Cable!」appears on the screen.

Disconnect the USB cable from the camera and printer.

Video System

You can use the AV cable (which should be purchased separately) to connect the camera and the television for realizing the video output. Connect one end of the AV cable to USB/AV port of the camera, connect the other end to AV-OUT port of the television. Adjust the format of the video output system according to your requirements, and the steps are as follows:

1. Press the [▲/] / [▼Info] button to select 「TV-System」 and then press the (OK) button to enter the menu.
2. Press the [▲/] / [▼Info] button to select 「NTSC」 or 「PAL」 and the Press the (OK) button to confirm.

NTSC: English, Chinese (Traditional), Japanese, French, Korean, Russian, Vietnamese, Greek, Hungarian

PAL: German, Spanish, Italian, Chinese (Simplified), Portuguese, Swedish, Danish, Finnish, Indonesia, Norwegian, Dutch, Turkish, Polish, Thai, Croatian, Czech, Arabic, Hindi

The video output system would change accordingly based upon the changes of the selected language.

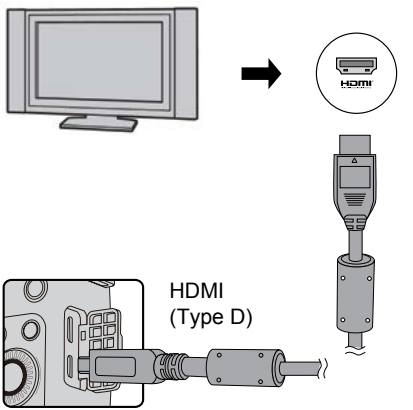
Set Eye-Fi Card Connection Mode

This camera supports wireless connection for Eye-Fi card. Upload files in camera to the Internet.

If the Eye-Fi card is not available in the camera, this feature is not displayed.

Supported HDMI Connections

HDMI (High Definition Multimedia Interface), is a fully digital audio/video transmission interface, through which uncompressed audio and video signals are transmitted.



Connecting HDMI-Ready TV

1. Use the cable with high resolution output terminal (which should be purchased separately) to connect the camera to the television which meets HDMI standard.
2. The camera will be automatically detected by the TV.
3. After connecting via HDMI, the camera enters Playback Mode.

Make sure the camera and the TV are both turned on before connecting.

HDMI CEC Control

After connecting the camera with TV-System, you may view pictures taken with the camera on the TV screen and operate the camera with your TV remote control to view and edit all images.

It is required that the TV-System supports HDMI CEC.

After the camera is successfully connected with TV-System, other buttons of the camera except the Power button cannot work, with the LCD staying dark.

Please refer to TV manual for relative settings of TV-System.

Introduction on Icons

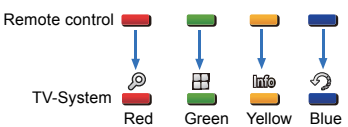
1. Info Hiding/Display
2. Zoom-in
   : Zoom in Images
   : Zoom out Images
3. Rotate Images
   : Only Turn Left
4. Image Index
   : 5*3 Index Playback
   : 10*5 Index Playback
   : 3*1 Date Folder Index
   : 5*3 Cont. Group Index
5. Back
6. Play Slide Show
7. Button for Switching Between Previous and Next Images

8. Videos
9. Time-lapse Movies
10. Movie Length: 00:00:00
11. Cont. Group File
12. : First Image Mark
13. 000/000: Current Sorting/Total Number of Images in Group
14. : Confirm Effect
15. : No Change

The following operations are available during HDMI CEC playback:

- 1:1 Single Playback
- Zoom-in Playback
- Rotate
- Index Playback
- Cont. Group Playback
- Slide Show Playback
- Video Play
- Time-lapse Movie Play
- Panoramic File Play
- Image Edit

Pressing the four-color button on remote control can enable relative functions displayed on the TV-System screen.



1:1 Single Playback:

Pressing the left and right arrow buttons can switch among images.

Zoom-in Playback:

Under the 1:1 single playback mode, press the red button to zoom in images; press the red and green buttons on remote control to zoom out images.

Rotate:

Under the 1:1 single playback mode, press the blue button to rotate single picture.

Index Playback:

Under the 1:1 playback mode, press the green button to enter index playback; press the central button to enter image selection and then the arrow buttons to select files you want and finally press the central button again to back to the 1:1 single playback.

Under the 5*3 index playback mode, press the green button to enter index selection and then the left and right arrow buttons to select , , and , and finally press the central button again to confirm your selection.

Cont. Group Playback:

Under the 1:1 single playback mode, press the central button to start playing images in continuous group.

If no images in the camera's cont. group, there will appear a prompt of no pictures if you select on the index playback interface.

Slide Show Playback:

Under the 1:1 single playback mode, press the down arrow button to enter slide show playback. While playing, you may press the left and right arrow buttons to directly switch between previous and next images and the central button to end playing.

Video Play:

Under the 1:1 single playback mode, select a video and then press the central button to start playing. While playing, you may use the arrow buttons and the central button to perform operations such as fast forward/backward, pause, frame forward/backward, back to play, etc. according to prompts on the screen.

Time-lapse Movie Play:

Same play mode as that of images. There is no volume in playing time-lapse files.

Panoramic File Play:

Under the 1:1 single playback mode, select a panoramic file and then press the central button to begin playing.

Image Edit:

Multiple edit can be repeated under image edit mode. Only one picture is saved finally.

Under the 1:1 single playback mode, select a picture and then press the up arrow button to enter image edit and start detecting face.

Press the up arrow button to do HDR editing.

Press the down arrow button to delete one picture.

Press the left and right arrow buttons to edit the color. 12 effects in total for selection.

The following beautifier touch-up functions cannot be enabled until a face is detected. You may press relative color buttons to edit.

: Skin Soften

: Eye Enlargement

: Eye Brightening

Edit tings corresponding to each type of files can be tabled.

O Available; X Non-available

	HDR	Color	Beautifier	Delete
Normal (face)	O	O	O	O
Normal (no face)	O	O	X	O
Panorama	X	X	X	O
Time-lapse	X	X	X	O
Video	X	X	X	O

HDMI CEC Connection

Function	Full Size Playback	Zoom-in Playback	Index Playback	Video/Time-lapse Movie Play	Cont. Group Play	Panoramic File Play
Zoom In	O	O (Movable to four directions during zoom-in)	X	X	X	X
Zoom Out	X	O	X	X	X	X
Rotate	O (turn left only)	X	X	X	X	X
Play Slide Show	O	X	X	O	O	O
Edit Image	O*1	X	X	X	X	X
Info Hiding/ Display	O	O	X	O*2	O*2	O*2
Delete	O	X	X	O*3	O*3	O*3

*1 After entering the image edit, relative operation of the beautifier cannot appear until a face is detected.

*2 It is available before and in playing and during pause.

*3 The function of Delete One cannot work until the camera enters image edit mode.

10 Appendices

Specifications

Design and specifications are subject to change without notice.

<table>
<tr><td colspan="2">Lens Mount</td><td colspan="3">Micro Four Thirds Mount</td></tr>
<tr><td rowspan="2">Sensor</td><td>Type</td><td colspan="3">4/3 CMOS</td></tr>
<tr><td>Effective Pixels</td><td colspan="3">16.83 Megapixels</td></tr>
<tr><td colspan="2">Anti-Handshake</td><td colspan="3">Sensor Shift</td></tr>
<tr><td rowspan="3">Number of Recording Pixels</td><td>Still Image</td><td>(4:3)
16MP: 4640×3480
10MP: 3648×2736
4MP: 2336×1752
3MP: 2048×1536
0.3MP: 640×480</td><td>(3:2)
14MP: 4608×3072</td><td>(16:9)
12MP: 4608×2592
2MP: 1920×1080</td></tr>
<tr><td rowspan="2">Movie</td><td>(FULL HD)
1920×1080, 30fps</td><td>(HD)
1280×720, 60fps
1280×720, 30fps</td><td>(VGA)
640×480, 30fps</td></tr>
<tr><td colspan="3">High-Speed Movie: VGA(120fps)</td></tr>
</table>

Digital Zoom		2x, 4x
File System		DCF 1.0, DPOF, Exif 2.3, PictBridge
File Format	Still Image	JPEG (Fine, Standard), RAW, RAW+ JPEG (Fine)
	Movie	MOV (H.264), Audio: Linear PCM [Stereo]
Shooting Modes		Auto Scene, Program AE, Shutter priority, Aperture priority, Manual Mode, Scene Mode [Panorama Mode, Handheld Night, Face Beautifier, Multi Exposure, Cat/Dog, Snow, Party, Sport, Night Portrait, Portrait, Children, Landscape, Sunset, Fireworks], Wi-Fi Mode, Custom Settings
Scan Panorama		Up to 360°
LCD Display		3.0inch (920k Pixels), Tilting
ISO Sensitivity		Auto, ISO 200/400/800/1600/3200/6400/12800
Focus Modes		Single AF, Continuous AF, Manual Focus, Manual Focus + Single AF
Focusing Area Selection		1-Area-Focusing, 25-Area-Focusing, Face Detection, Manual Area Focusing
AE/AF Lock		Yes
AF Assist Lamp		Yes

Exposure Modes	Artificial Intelligence AE (AiAE), Center-Weighted Average, Spot, Multi-Spot, Face AE
	Program AE (AE-Lock Available), Aperture Prior AE, Shutter Prior AE, Manual
Metering Range	EV 0~16 (F3.5, ISO200)
AE Bracket	Manual:±3 Stops in 1/3 Stop Increments
	AEB:±2 Stops in 1/3 Stop Increments
Shutter Type	Mechanical, Electronically-controlled, Focal-plane Shutter
Shutter Speed	1/4000 ~ 30 Seconds (Manual: 30 Minutes)
Continuous Shooting	Yes
Playback Modes	Single Photo, Index (9/16Thumbnails), Date, Burst Shooting, Zoom (Approx. ×2~×8), Slide Show (Still/Movie/Still + Movie)
White Balance Control	AWB, Daylight, Cloudy, Shadow, Fluorescent, Fluorescent H, Incandescent, Manual WB, Color Temperature Setting (1900K ~10000K), WB Bracketing

Flash	Flash Method	External
	Flash Modes	Force Off, Fill Flash, Flash Auto, Red-Eye Reduction, Slow Sync., Slow Sync. + Red-Eye Reduction, Rear curtain sync
Filter		Normal, Vivid, Black and White, Dreamy, Vignetting, Ektachrome, Kodachrome, Kodacolor, Salon, Punk, Negative, Reflection, Sketch, Fish Eye, 4 Grids - Stylish, 4 Grids - Partial Color
Multi-Language Support		27 Languages
PC Interface		USB 2.0
Jacks	HDMI	HDMI Type-D
	Flash Attachment	Hot Shoe

Eye-Fi Support	Yes
Wi-Fi	Yes (802.11 b/g/n)
Remote Viewfinder	Yes (via smart device)
Power	Rechargeable Li-ion Battery LB-070, 7.4V 1000mAh, In-Camera Charging
Shooting Capability (Battery Performance)	Approx. 410 Shots with KODAK PIXPRO SZ ED 12-45mm F3.5-6.3 AF Lens (Based on CIPA Standards)
Operation Environment	Temperature: 0 ~ 40°C, Humidity: 0 ~ 90%
Dimensions (W×H×D)	Approx. 115.7×67.4×35.6mm (Based on CIPA Standards)
Weight	Approx. 290g (Body Only)

Prompt and warning messages

Messages	Description	Reset mode
Warning! Battery exhausted.	Warning before power off when the camera battery is exhausted.	Displaying that it will power off after 2 seconds.
Built-in memory error!	In the case of built-in memory error.	Disappear after 2 seconds and return to shooting.
Warning! Do not turn off your camera during update!	Appears during upgrade of firmware.	Turn it off and remove the message after completing the upgrade.
Connection Failed!	In the case of failing to connect to a PC or a printer. In the case of failing to connect to a TV-system (including HDMI).	Remove transmission line to stop connection, and the message is removed.
Image noise reduction processing, please wait.	When noise reduction is enabled. Process after shooting with a long exposure.	Wait for processing to complete.
This Lens is not supported.	The lens installed cannot be used with this camera.	Manually shut down the camera and replace with a suitable lens. There is no need to reset the camera.

Messages	Description	Reset mode
Cannot change settings under this mode.	In the case of the setting items under the shooting mode cannot be set when pressing button Fn1/Fn2 or independent function button.	Remove the message after 2 seconds and return to shooting.
In this capture ******** Still size limited to ** M	Choose the image size in the Fn1 / Fn2 button, then encountering the option of limiting still size, press the Fn1 / Fn2 button.	Remove the message after 2 seconds and return to shooting.
Improper alignment. Please try again.	The joint offset in the Panorama shooting is too large.	Remove the message after 2 seconds and return to shooting.
The color effects can not be used in the video.	When (OK) electing Dreamy, Vignetting, Kodacolor, Salon, Fish Eye and 4-Grids (Stylish / Partial Color) effects under color effect, this restriction description will be displayed below the options.	Remains displaying below the options without hiding.
Capture reached maximum limit	Press the shutter to capture images in recording a video. If the number of images captured exceeds 15, there will be a prompt if you press the shutter again.	The message will disappear in 2 seconds with no influence to video recording.

Messages	Description	Reset mode
The Lens is not installed properly. Please re-install the lens.	The lens is not installed or not installed properly and it cannot be started.	Do not reset, turn off manually and reinstall the lens.
The Lens signal can not be linked. Please re-install the lens.	The lens has been installed, but it does not extend when the camera is turned on.	Extend the lens manually. (In the case that the lens has to be extended)
Please check the status of a lens.	The lens has been installed, but it does not push out when the camera is turned on.	Push the lens out manually. (In the case that the lens has to be pushed out manually)
Write Protect !	In the case that there is lock protection for the card when saving the image.	Disappear after 2 seconds and return to the previous image.

Messages	Description	Reset mode
Card Full !	In the case that the camera detects the card capacity is insufficient when turning on or pressing the shutter.	Disappear after 2 seconds and return to the previous image.
Memory Full !	In the case that the camera detects the memory capacity is insufficient when turning on or pressing the shutter.	Disappear after 2 seconds and return to the previous image.
Exceeded maximum folder number.	Prompt message when the archives or file folders in memory card have reached the maximum (9999 for archives, 999 for file folder).	The message will end after the camera processing is complete.
Card Error !	The card cannot be recognized after being formatted.	Normal display.
Card is not formatted.	The inserted memory card is unformatted or has been formatted on a computer or other device and is not compatible with this camera.	Disappear after 2 seconds and enter the formatting process.

Messages	Description	Reset mode
Slow access	When a card lower than Class 4 is recording movie above HD, it may be accessed slowly and the recording cannot be continued. The operation image may appear after 2 seconds (it may need to wait up to 9 seconds for the built-in memory).	Remove the message after 2 seconds and return to the shooting image.
Cannot write to SD card.	The recording cannot be continued if there are problems which may cause interruption of the recording during writing to the card or recording in the process of shooting or recording.	Disappear after 2 seconds and return to shooting.
No Picture!	When pressing the button there is no image in the camera or the card.	Return to the shooting image after 2 seconds.
No continuous group file.	When it switches from playback mode to Cont. playback mode, if there is no continuous group file in the files, this prompt message will display.	Remove the message after 2 seconds and return to Thumbnail 3x3 mode.
No Red-Eye Detected!	No red-eye detected when pressing for red-eye removing in playback touch-up.	Disappear after 2 seconds and return to the touch-up menu.

Messages	Description	Reset mode
Too many pictures for fast processing.	The image may be unable to enter the date playback if the image exceeds the specification in the case of date playback. (when the image number in the card exceed 5000)	Remove the message after 2 seconds and return to Thumbnail 3x3 mode.
Unable to recognize files.	When the format of the file viewed is not supported or the file is damaged and cannot be recognized properly.	This image message can only be removed by deleting the file.
Protected! Undeletable!	This message will be displayed on the image immediately when executing delete action to the protected files.	Disappear after 2 seconds and return to the previous image.
This image cannot be edited.	When pressing (OK) to play back the bad files.	Remove the message after 2 seconds and return to the original image.
Cannot edit because no face detected!	No face image entered into the touch-up menu.	Remove the message after 2 seconds and return to the menu.

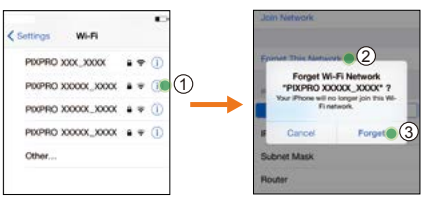
Troubleshooting

Problem	Possible causes	Solution
Camera does not turn on	■ The battery has been depleted. ■ The battery is not inserted correctly.	■ Recharge the battery. ■ Correctly reinstall the battery.
Camera turns off suddenly during operation	■ The battery has been depleted.	■ Recharge the battery.
The picture is blurred	■ Camera shakes while taking a picture.	■ Turn on OIS feature. ■ Please use tripod for high magnification (above 15X) optical zoom.
Images and video files cannot be saved	■ The memory card is full. ■ The memory card is locked.	■ Use another memory card or delete unnecessary files. ■ Unlock the memory card.
Images will not print from the connected printer	■ The camera is not connected to the printer correctly. ■ The printer is not PictBridge compatible. ■ The printer is out of paper or ink. ■ The printer paper is jammed.	■ Check the connection between the camera and printer. ■ Use a PictBridge compatible printer. ■ Load paper into the printer or replace the ink cartridge in the printer. ■ Remove the jammed paper.

Problem	Possible causes	Solution
Saving data to memory card is slow	■ Using a memory card below Class 4 may result in slower recording times.	■ Use a memory card with write Class higher than 4 to improve performance.
Cannot write to the memory card	■ The memory card has been locked.	■ Release the write lock of the memory card or replace with another card.
Too many movies to process	■ The number of pictures or folders in the memory card exceed the specifications, so the playback of data folder can not be displayed.	■ Delete unwanted files.

Please enter the new password on smart device after changing Wi-Fi password. Some models of smart device will remember the Wi-Fi password previously entered, so please clear the old password on smart device manually before connection (For different models, this operation may be varied, please subject to your user manual.)

iOS devices



Android devices

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